# IN THE HIGH COURT OF SOUTH AFRICA (GAUTENG DIVISION, PRETORIA)

Case No.: 025786/2024

In the matter between:

DEMOCRATIC ALLIANCE Applicant

and

MINISTER OF ELECTRICITY First Respondent

MINISTER OF MINERAL RESOURCES

AND ENERGY Second Respondent

NATIONAL ENERGY REGULATOR OF

SOUTH AFRICA Third Respondent

**ESKOM HOLDINGS SOC LIMITED** Fourth Respondent

MINISTER OF PUBLIC ENTERPRISES Fifth Respondent

PRESIDENT OF THE REPUBLIC OF SOUTH AFRICA Sixth Respondent

## SUPPLEMENTARY FOUNDING AFFIDAVIT

I, the undersigned,

## **KEVIN MILEHAM**

do hereby make oath and say that:

I deposed to the founding affidavit in this application on behalf of the Democratic
 Alliance (DA).

- 2. The facts in this affidavit fall within my personal knowledge, save where the contrary appears from the context. To the best of my knowledge and belief, they are both true and correct. Where I make submissions of law, I do so on the advice of the DA's legal representatives.
- 3. I use the same abbreviations as those used in the founding affidavit.

## I THE PURPOSE OF THIS AFFIDAVIT

- 4. The DA launched this application on 7 March 2024.
- 5. The following respondents subsequently filed notices of intention to oppose:
  - On 20 March 2024, the Minister of Mineral Resources and Energy
     (Minister of Energy).
  - 5.2. On 2 April 2024, Eskom Holdings SOC Limited (Eskom).
  - 5.3. On 4 April 2024, the National Energy Regulator of South Africa (NERSA).
- 6. The Minister of Electricity, the Minister of Public Enterprises, and the President have not opposed this application.
- 7. On 18 April 2024, the parties met with the Deputy Judge President of this Court for a case management meeting. After this meeting, on 22 April 2024, the Deputy Judge President directed that this application proceed as follows:

- 7.1. By 17 May 2024, the Minister of Electricity, the Minister of Energy, and NERSA may file their rule 53 records.
- 7.2. By 21 June 2024, the DA may file a supplementary founding affidavit in terms of rule 53(4) of the Uniform Rules of Court.
- 7.3. By 26 July 2024, the opposing respondents may file an answering affidavit.
- 7.4. By 16 August 2024, the DA may file a replying affidavit.
- 7.5. The matter is set down for hearing on 15 and 16 October 2024.
- 8. On 20 May 2024, the DA received two records filed under rule 53.
  - 8.1. First, a record from NERSA. This is a record of NERSA's decision to concur with the Minister of Electricity's section 34 determination. I will refer to this as the NERSA record.
  - 8.2. Second, a set of documents filed as "The State Respondents of [sic] record of proceedings". This "record" is not paginated or arranged in chronological order. It is not clear to which decision this "record" relates. It appears, as I explain below, that this "record" comprises two records. First, the record of documents before the Minister of Energy when he decided to "transfer" the section 34 determination to the Minister of Electricity (Energy Record). Second, the record of documents that served before the Minister of Electricity when he decided to issue the section 34 determination (Electricity Record). Not all the documents in

the Energy Record are in the Electricity Record. For convenience, I refer to the two records collectively as the **Ministers' records**.

- 9. The purpose of this affidavit is to supplement the DA's founding affidavit in the light of NERSA's record and the Ministers' records. The DA files this affidavit in terms of rule 53(4) and this Court's directives of 22 April 2024.
- 10. NERSA's record and the Ministers' records forcefully affirm the DA's grounds of review as set out in the DA's founding affidavit.
  - 10.1. NERSA's decision was procedurally unfair or procedurally irrational.

    The records reveal that NERSA considered *substantive* and *critical* information from the Minister of Energy two years *after* NERSA ended its public consultation process. Stakeholders were denied the opportunity to address core facets of NERSA's concurrence in the section 34 determination, like the *cost of* and *demand for* nuclear energy.
  - 10.2. It is clear that the Minister of Electricity rubberstamped the Minister of Energy's draft section 34 determination; and the Minister of Energy acted without any authority. The Minister of Electricity failed to apply his mind to whether he should promulgate the section 34 determination. The Minister of Energy continued to drive the section 34 determination, including before NERSA, even though he lacked the authority to do so.
  - 10.3. The section 34 determination contravenes NERSA's condition that the procurement proceed under an EPC contract. The records reveal that while NERSA decided that the Minister had complied with all the

conditions it had imposed, the Minister had, in fact, advised NERSA that it would *not* accept the EPC procurement condition being placed on the procurement. Nevertheless, NERSA did not object to the section 34 determination being gazetted despite the violation of this crucial condition that it had imposed, and without taking any decision (even if this were permissible) to retract the EPC procurement condition. This is unlawful.

- 10.4. The Minister of Energy failed to address NERSA's conditions regarding the demand for and cost of nuclear energy. The Minister failed to provide NERSA with any new data on whether South Africa requires nuclear energy, and how much nuclear energy would cost. He regurgitated outdated statistics in response to NERSA's conditions—the same statistics known to NERSA at the time it imposed conditions on concurrence, and which therefore plainly could not have satisfied those conditions. NERSA, irrationally, nonetheless concluded that the Minister had successfully demonstrated that South Africa needs nuclear energy and can afford to procure it.
- 11. The records reveal a further ground of review: substantive irrationality and unreasonableness. Why do NERSA and the Minister of Energy want to procure nuclear energy? Their rationale is that *only* nuclear energy can meet the "baseload" currently met by coal. But there is no reason for this assumption. At the very least, NERSA and the Minister of Energy would need to take account of and explain their rejection of the Government's Energy Action Plan (discussed below) which speaks to multiple sources to provide South Africa's

energy needs. A constant demand for energy does not need to be met by a single source of energy that can supply energy constantly. What matters is whether the energy system as a whole can meet demand.

- 12. This affidavit addresses the following:
  - 12.1. The contents of the NERSA record.
  - 12.2. The contents of the Ministers' records.
  - 12.3. The documents missing from the records.
  - 12.4. The DA's grounds of review.

#### II THE NERSA RECORD

- 13. The NERSA record is paginated and arranged chronologically. The NERSA record has been uploaded to Caselines, and it forms part of the papers in this matter. Therefore, to avoid prolixity and duplication I do not attach copies of the record to this affidavit, but will provide relevant page and Caselines references.
- 14. The NERSA record includes four kinds of documents.
- 15. First, the documents in NERSA's possession before NERSA initiated a public consultation process. These documents are limited to—
  - 15.1. the 2019 IRP (pg 1; CL 16-16);
  - 15.2. a draft section 34 determination, undated and signed by the Minister of Energy (pg 101; CL 16-116);

- 15.3. minutes of a meeting of NERSA's Electricity Subcommittee of 11 November 2020 (pg 103; CL 16-118), in which the Subcommittee approves the public consultation paper; and
- 15.4. NERSA's consultation paper dated 23 November 2020 (pg 129; CL 16-144).
- Second, public comments. The NERSA record includes 47 public submissions,
   dated between 21 January 2021 and 5 February 2021 (pg 150 to 1073; CL 16-165 1088). These submissions from the public included submissions from:
  - 16.1. Independent energy research institutions, such as the University of Cape Town's Energy Systems Research Group.
  - 16.2. The Council for Scientific and Industrial Research (CSIR), the organ of state specifically tasked with scientific and technological research in order to foster socio-economic prosperity.
  - 16.3. Specialised environmental public interest NGOs, such as the Southern African Faith Communities' Environment Institute (SAFCEI) and Earthlife Africa-Johannesburg (Earthlife).
  - 16.4. Independent experts such as Professor Steve Thomas (annexed to Earthlife and SAFCEI's submission), an eminent and internationally respected academic in the field of energy and energy. Indeed, as he explains in his submission:

"I am Emeritus Professor of Energy Policy at the University of Greenwich in London. I worked as an energy policy researcher from 1976 till my retirement in 2015. From 1976-2000, I was a member of the Science Policy Research Unit at the University of Sussex and from 2001-2015 I was a member of the Public Service International Research Unit at the University of Greenwich. Since my retirement I have remained active in energy policy debates, continuing to publish articles in academic journals and becoming the Coordinating Editor of Energy Policy, the major policy journal covering energy worldwide. Much of my research has concerned economics and policy on nuclear worldwide and I have been a consultant to the International Atomic Energy Agency and the Brazilian government on nuclear power. I was a member of the Expert Panel appointed by the South African government in 2001 to review the prospects for the Pebble Bed Modular Reactor, writing the section on the economics of the design." (pg 779; CL 16-794)

- 16.5. Eskom, the organ of state designated in the section 34 determination as the generator and buyer of electricity from the new nuclear power plants.
- 16.6. Public interest NGOs, such as the Helen Suzman Foundation and OUTA.
- 16.7. Well-respected economic and social policy organisations, committed to economic growth and transformation, such as Business Unity South Africa (BUSA).
- 16.8. The Energy Intensive Users Group of Southern Africa, whose members account for over 40% of the electrical energy consumed and collectively contribute to 22% of the South African GDP.
- 17. Below, where I refer to NERSA's failure to invite "public" comment after receiving the Minister of Energy's report on NERSA's substantive conditions, and prior to deciding to concur with the Minister in August 2023, I include the type of stakeholders, interested and affected parties, independent experts with

specialised expertise, and organs of state who responded to the initial request for public comment.

- 18. Third, documents leading to NERSA's decision to suspend its concurrence and impose several substantive conditions on the Minister's draft determination.
  These documents include—
  - 18.1. minutes of an Electricity Subcommittee meeting on 20 August 2021, in which the Subcommittee recommends suspending NERSA's concurrence (pg 1074; CL 16-1089);
  - 18.2. minutes of a NERSA meeting of 26 August 2021, in which NERSA resolves to suspend its concurrence (pg 1086; CL 16-1101);
  - 18.3. NERSA's media statement of 3 September 2021, announcing the suspension of its concurrence (pg 1100; CL 16-1115); and
  - 18.4. NERSA's reasons for suspending its concurrence (pg 1104; 16-1119).
- 19. Fourth, documents leading to NERSA's decision to concur with the Minister's section 34 determination. These are limited to four documents—
  - 19.1. the Minister of Energy's "response" to NERSA's suspensive conditions, dated 20 July 2023, in which he purports to address NERSA's conditions (pg 1218; CL 16-1233);

- 19.2. NERSA's "analysis" of the Minister of Energy's response, undated (pg 1271; CL 16-1286), in which NERSA concludes that the Minister complied with NERSA's conditions;
- 19.3. minutes of a Subcommittee meeting dated 25 August 2023 (pg 1284; CL 16-1299), at which the Subcommittee resolves to "note" that the Minister of Energy complied with NERSA's suspensive conditions; and
- 19.4. minutes of a NERSA meeting dated 30 August 2023 (pg 1474; CL 16-1489), at which NERSA decides and "notes" that the Minister of Energy complied with NERSA's suspensive conditions.

## III THE MINISTERS' RECORDS

20. The Ministers' records are neither paginated nor arranged chronologically. Their haphazard nature echoes the faulty and ultimately unlawful decisions that the records reflect. For convenience, the DA will refer to the Caselines references in the Ministers' records. As with NERSA's record, given that the Ministers' records have been uploaded to Caselines, I do not attach copies to this affidavit.

## (A) THE ENERGY RECORD

- 21. The Energy Record includes six kinds of documents.
- 22. First, documents relating to the Minister of Energy's request for information in respect of a nuclear new build power procurement programme (**RFI**). These documents are limited to—

- 22.1. the IRP 2019 (CL 15-15-6ff);
- 22.2. a media statement announcing the RFI dated 14 June 2020 (CL 15-109);
- 22.3. the RFI itself, with a deadline of 30 June 2020 (roughly two weeks later) (CL 15-111ff); and
- 22.4. a presentation to the parliamentary Portfolio Committee on Mineral Resources and Energy by the DMRE, dated 23 February 2021, which summarises the responses the Minister received to the RFI (CL 15-139).
- 23. The Ministers and NERSA have not included the responses to the RFI in the record. The Minister of Energy never placed the RFI responses before NERSA or the Minister of Electricity. I return to this below.
- 24. Second, documents sent to NERSA by the Minister of Energy in support of his request for NERSA to concur in his section 34 determination. These documents are limited to—
  - 24.1. a letter to NERSA dated 15 June 2020 (the day after the announcement of the RFI), in which the Minister of Energy requests NERSA to "confirm" that NERSA will concur in the Minister's determination (CL 15-106);
  - 24.2. a letter from NERSA to the Minister of Energy dated 14 July 2020, in which NERSA explains that it cannot "confirm" that it will concur with the Minister's determination until NERSA decides for itself whether it should concur (CL 15-136–7); and

- 24.3. a letter to NERSA dated 2 August 2020, in which the Minister of Energy clarifies that he seeks NERSA's concurrence with the section 34 determination (CL 15-138).
- 25. NERSA has failed to include these documents in its record.
- 26. The Minister of Energy provided NERSA with no other documents in relation to the draft section 34 determination.
- 27. Third, documents relating to the Minister of Energy's involvement in NERSA's public consultation process. These are limited to—
  - 27.1. NERSA's consultation paper dated 23 November 2020 (CL 15-160ff);
  - 27.2. NERSA's public hearing program for 23 and 24 February 2021, which shows that the Department's Deputy Director General: Nuclear Energy (Mr Zizamele Mbambo) presented submissions on 23 February 2021 for half an hour (CL 15-181ff);
  - 27.3. the Department's presentation to the public dated 24 February 2021, which it presented as part of NERSA's public consultation process;
  - 27.4. a presentation apparently made only to NERSA dated 24 February 2021, in which the Department provides a "preliminary response" to questions raised by NERSA (CL 15-185ff); and

- 27.5. a report dated 10 March 2021, in which the Department responds to questions raised by NERSA during the public consultation process (CL 15-212ff).
- 28. Other than the consultation paper, NERSA's record does not include these documents relating to the public consultation process. From the record filed it appears that NERSA neither considered nor received the Department's two presentations dated 24 February 2021 and the report dated 10 March 2021.
- 29. Fourth, various documents from NERSA communicating NERSA's decision to suspend its concurrence:
  - 29.1. A letter from NERSA dated 3 September 2021 informing the Minister of Energy of NERSA's decision to suspend its concurrence (CL 15-241). Somewhat confusingly, the letter attached both an (unamended) copy of draft section 34 determination that NERSA had co-signed (annexure A, CL 15-243–4) and NERSA's decision to suspend its concurrence and impose both suspensive conditions and the ECP contracting restriction, which amended the terms of the section 34 determination (annexure B, CL 15-245–6)
  - 29.2. NERSA's media statement of 3 September 2021, announcing its decision to suspend its concurrence (CL 15-247–8).
  - 29.3. NERSA's reasons for its decision to suspend its concurrence, dated 17 November 2021 (CL 15-249ff).

- 30. Fifth, documents relating to the Minister of Energy's purported compliance with NERSA's conditions. These documents are limited to—
  - 30.1. a letter received from SAFCEI and Earthlife Africa-Johannesburg dated 14 January 2022, in which they request an opportunity to make representations on the evidence the Minister of Energy intended to present to NERSA to demonstrate compliance with the conditions (CL 15-367ff);
  - 30.2. a response to SAFCEI by the Minister of Energy dated 3 March 2022, in which he confirmed that NERSA would only concur with the Minister's determination "pursuant to NERSA obtaining public input" (CL 15-369– 370); and
  - 30.3. the report by the Minister of Energy dated 20 July 2023, with a cover letter dated 1 August 2023, purporting to demonstrate compliance with NERSA's conditions (CL 15-371ff). I note that portions of the Minister's report included in the Energy Record were redacted. However, the report is included in full, in unredacted form, in the NERSA record (CL 16-1233ff). I, therefore, rely on the unredacted version of the Minister's report provided by NERSA.
- 31. I underscore that from 26 May 2023, the Minister of Energy no longer had the lawful authority to consider and issue a section 34 determination. The President delegated that power to the Minister of Electricity (Proclamation 121 of 2023 published on 26 May 2023 in the Gazette, CL 15-557). Yet the contents of the Energy record confirm that the Minister of Energy nonetheless continued

to engage with NERSA on the section 34 determination—without the Minister of Electricity's knowledge or approval and without consulting the Minister of Electricity. This is made plain by the letter from the Minister of Energy to the Minister of Electricity on 3 November 2023 (CL 15-571–2), which I discuss below.

- 32. Sixth, documents relating to NERSA's decision that the Minister complied with the conditions.
  - 32.1. A letter from NERSA to the Minister of Energy dated 12 September 2023, informing the Minister that NERSA considered him to have complied with the conditions (CL 15-426–7).
  - 32.2. NERSA's undated analysis of the Minister's response (CL 15-428ff). It appears that this analysis was attached to NERSA's letter dated 12 September 2023.
- 33. The above six kinds of documents were before the Minister of Energy when, on 2 November 2023, he decided to "transfer" the section 34 determination to the Minister of Electricity. The Minister of Energy's "transfer" decision is contained in a letter dated 2 November 2023, and underpinned by—
  - 33.1. A routing form and memorandum signed and approved by numerous officials in the Department, including the Minister of Energy, dated 2 November 2023, in which the Minister of Energy "transferred" the section 34 determination to the Minister of Electricity (CL 15-561ff); and

33.2. an email dated 29 September 2023 from the Director: Legal Services of the Department, which – in apparent response to a request for approval for the Minister of Energy to gazette the section 34 determination – warns the Minister of Energy that (a) he may not exercise section 34 powers with effect from 26 May 2023; and (b) that the determination is likely to be challenged given the significant lapse of time since the Minister referred the determination to NERSA and "intervening developments" (CL 15-1570).

## (B) THE ELECTRICITY RECORD

- 34. There were only two documents before the Minister of Electricity when he decided to issue the Minister of Energy's section 34 determination on 26 January 2024.
  - 34.1. First, a letter to the Minister of Electricity dated 2 November 2023 from the Minister of Energy, in which the Energy Minister "transfers" the section 34 determination to the Electricity Minister "to bring the Determination into force by publication in the Gazette" (CL 15-577–8).
  - 34.2. Second, a presentation dated 24 November 2023 to the Minister of Electricity by the DMRE, which recommends that the Minister of Electricity "accepts the transfer" of the section 34 determination and publishes it in the Gazette (CL 15-579ff).
- 35. So, the Minister of Electricity did <u>not</u> consider numerous documents that would have been essential in order for him to apply his mind to the section 34 determination, namely—

- 35.1. the various other documents in the Energy Record, like the public comments, NERSA's decision (and reasons) to suspend its concurrence and the conditions it imposed, the Minister of Energy's report on compliance with NERSA's suspensive conditions, and NERSA's "analysis" of the Minister of Energy's compliance with NERSA's conditions; and
- 35.2. any documents produced by the Minister of Electricity's division or staff in the Office of the Presidency, like advice or memoranda from his own personnel.

## III THE DOCUMENTS MISSING FROM THE RECORDS

- 36. The NERSA and Energy records reference but fail to include certain documents.
- 37. The NERSA Record references but fails to include—
  - 37.1. the legal opinion referenced at page 1080 of NERSA's record (CL 16-1095);
  - 37.2. "annexure E" referenced at page 120 of NERSA's record (CL 16-135); and
  - 37.3. the "addendum" referenced at page 1079 of NERSA's record (CL 16-1095).
- 38. The Energy Record references but fails to include—

- 38.1. the Request for Information (RFI) Assessment Report referenced at page 21 of the Minister of Energy's Report dated 20 July 2023 (CL 16-1253);
- 38.2. the responses to the RFI, referenced at various parts of the record, including slide 4 of the Minister of Energy's presentation to the Portfolio Committee on Mineral Resources and Energy on 23 February 2021 (CL15-142);
- 38.3. the attachments to the email sent by Saandhri Naidoo on 29 September 2023 (CL 15-570); and
- 38.4. the documents listed in the table on page 3 of the Minister of Energy's "Response to Section 34 Determination NERSA Public Consultation Process" (CL 15-215).

# (A) CORRESPONDENCE WITH NERSA AND THE SUPPLEMENTARY NERSA RECORD

- 39. On 29 May 2024, the DA wrote to NERSA (**SFA1**).
  - 39.1. The DA requested that NERSA provide the documents listed in paragraph 37 above, the documents referenced but not included in the NERSA record.
  - 39.2. The DA further requested that NERSA confirm that the documents in paragraph 38 above (documents referenced but not included in the Energy record) were not before NERSA when NERSA concurred with the section 34 determination.

- 40. On 13 June 2024, the DA followed up with NERSA (**SFA2**)
- 41. NERSA responded only on 20 June 2024, the day before this affidavit was due to be filed (SFA3). NERSA attached to its response a "supplementary record" (Supplementary NERSA record). The Supplementary NERSA record includes two documents:
  - 41.1. Addendum A: Issues Raised at the Subcommittee workshop of 18 August 2021 (CL 16-1512). This appears to be the document mentioned at page 1079 of NERSA's record (CL 16-1095), which NERSA originally omitted. I will refer to it as **Addendum A**.
  - 41.2. Addendum E: Project Plan. This appears to be the "annexure E" mentioned at page 120 of NERSA's record (CL 16-135), which NERSA originally omitted from its record.
- 42. NERSA refused to provide the legal opinion referred to at page 1080 of NERSA's record (CL 16-1095). NERSA also redacted portions of Addendum A relating to "legal analysis". NERSA invokes legal privilege as the reason for refusing to provide the legal opinion and redacting Addendum A.
- 43. I make two points about this supplementary record.
  - 43.1. First, NERSA fails to respond to the DA's request that NERSA confirms that the documents mentioned but not included in the Energy Record were not before NERSA (listed in paragraph 38 above). Given that NERSA does not deny that these documents were not before it and does

not furnish these documents, it must be accepted that these documents were not before NERSA. NERSA thus failed to consider relevant considerations and could not come to a rational, lawful decision.

43.2. Second, Addendum A reveals that NERSA regarded the Minister as "the one who can determine the types of energy sources for the country". NERSA even considered itself "bound to support and implement Government policy including the IRP" (CR 16-1520). These reasons do not appear in NERSA's RFD. However, to the extent that NERSA decided to concur with the section 34 determination for these reasons, NERSA was materially influenced by an error of law. As I explained in the DA's founding affidavit, the IRP is not a binding source of law (FA at paras 46.4 and 61). Moreover, NERSA plays an equally important role in section 34 determinations; it is not up to the Minister only to determine the energy sources for the country (FA at para 28).

## (B) CORRESPONDENCE WITH THE MINISTERS

44. On 29 May 2024, the DA wrote to the Ministers requesting the documents referenced but not included in the Energy record (listed in paragraph 38 above) (SFA4). On 13 June 2024, the DA followed up with the Ministers (SFA2 above). The Ministers failed to respond to the DA's requests. The DA nonetheless filed this affidavit by 21 June 2024 as required by this Court's directive to preserve the timelines for the filing of papers. The DA reserves the right to file a further affidavit should the Ministers produce or rely on these documents.

## IV THE GROUNDS OF REVIEW

- 45. In this part, the DA demonstrates how the records affirm and bolster the grounds of review set out in the DA's founding affidavit, namely:
  - 45.1. The section 34 determination was issued in a procedurally unfair or irrational manner.
  - 45.2. The Minister of Electricity failed to apply his mind to the section 34 determination.
  - 45.3. The section 34 determination contradicts the EPC condition set by NERSA.
  - 45.4. The Minister of Energy, assuming he had the authority to do so, failed to provide NERSA with a demand and costs analysis as required by NERSA.
- 46. The DA then demonstrates how the section 34 determination was tainted by irrationality and unreasonableness. NERSA and the Minister of Energy decided on the section 34 determination assuming that an energy baseload must be met by a single, constant source of energy generation.
- 47. The DA asks that this affidavit be read with its founding affidavit. The DA does not repeat the allegations made in its founding affidavit, but focuses on how the records supplement the grounds advanced by the DA in the founding affidavit. The DA stands by the allegations made in the founding affidavit.

## (A) PROCEDURAL FAIRNESS OR IRRATIONALITY

- 48. The DA submitted in its founding affidavit that NERSA's decision to concur with the Minister of Energy's section 34 determination was procedurally unfair or procedurally irrational for three reasons:
  - 48.1. NERSA only considered the substance of the Minister of Energy's proposed section 34 determination, like the cost of and demand for nuclear energy, *after* the 2021 public consultation process, and after receiving the Minister's report in July 2023. But it did so without allowing the public (including parties and bodies that NERSA knew had specialised expertise) to comment on the Minister's report. It was in this report that the Minister purported to address the substance of and reasons for the proposed section 34 determination (FA at paras 117 125).
  - 48.2. Two years passed between the public consultation in 2021 and the Minister of Energy addressing NERSA's conditions in 2023 (FA at para 131).
  - 48.3. There were significant developments in the energy landscape during the period between NERSA's decision to suspend its concurrence and NERSA's decision that the Minister complied with the suspensive conditions (FA at para 132).
- 49. The records affirm these reasons.

## (i) The substance of the determination

- 50. The records reveal how NERSA was only able to consider substantive and critical aspects of the section 34 determination and in particular the Minister's rationale for the determination after the public consultation process ended, and did so **without** inviting comment from the public on the Minister's substantive submissions (including the very stakeholders whose initial submissions led to the imposition of the conditions).
- 51. The most important document in this regard is the Minister of Energy's report of 20 July 2023, received by NERSA on 1 August 2023. The Minister presented this report to NERSA in a purported attempt to demonstrate that the section 34 determination complied with NERSA's suspensive conditions.
- 52. In this report, the Minister addresses the following issues:
  - 52.1. Recent advances in nuclear technology. These include advances in Small Modular Reactors (SMR) published in 2022—after the public consultation process ended in February 2021 (pg 1229; CL 16-1244). The Department addresses how SMRs are still not ready for commercial deployment (pg 1231; CL 16-1246), compared to conventional Pressurised Water Reactors (PWR).
  - 52.2. The affordability of nuclear energy. The Department, relying on a 2013 study and its RFI responses, provides estimates for the capital costs, the "levelized costs of electricity", and the "overnight costs" of nuclear energy (pg 1236-9; 16-1251–4). Based on these estimates, and assuming it procures certain PWRs and two SMRs, the Department concludes that

nuclear energy will cost around **R130.79 billion** for 2500MW (pg 1239; 16-1254). This appears to be only the "overnight costs" of the procurement, excluding the costs of capital required to fund the construction of the power plants. The Department asserts that this makes the cost of nuclear energy either comparable to or less than other sources of electricity (pg 1240-1; 16-1255–6).

- 52.3. The pacing and scale of the procurement. The Department explains, for the first time, that it intends to procure 2300MW of nuclear power from PWRs and 200MW from SMRs (pg 1233 and 1241; CL 16-1248 and 1256). The Department never took this position before the public consultation process. A PWR will take between 10 to 14 years to commission (pg 1241), with a similar timeframe for a SMR (pg 1243; CL 16-1258). The Department assumed that it would issue an RFP for these reactors in 2023 (pg 1241; CL 16-1256). The Department suggests that South Africa's existing nuclear professionals will suffice to manage and operate the power stations (pg 1244; 16-1259).
- 52.4. The need for nuclear energy. The Department concedes that there has been "no effective measure of actual, unconstrained, demand" since Eskom began implementing load shedding in 2007 (pg 1248; CL 16-1263). The Department then provides demand projections for different sectors, like mining and industry, based only on the IRP2019 (pg 1250-1; CL 16-1265–6). The Department alleges that the main projected demand for electricity is from intensive industries that require "24-hour firm energy" that cannot be provided from "back-up power" (pg 1253; CL

- 1268). The Department estimates that by 2030, there will be an "energy gap", considering Eskom's ageing and decommissioned coal fleet (pg 1258; CL 16-1273). The Department explains that, according to Eskom, 2030 is the year at which demand for electricity will surpass the available baseload supply (pg 1259; CL 16-1274). By 2035, that gap will be 5000MW (pg 1264; CL 16-1279).
- 52.5. The basis on which the procurement should be contracted. The Department, in a blatant contradiction of NERSA's condition of an EPC, provides an overview of various contracting models and informs NERSA that the Department "has taken note" of NERSA's requirement for an EPC. I return to how this renders the determination unlawful below. For now, the point is that this is a substantive issue, which the Minister and NERSA only addressed *after* public consultations, and on which the public (including key stakeholders) were not given an opportunity to comment.
- 53. This report was never published. The public (including all the independent experts and stakeholders, including organs of state, such as Eskom and CSIR, which made submissions in the initial public consultation process in 2021) never had an opportunity to comment on or respond to this report.
- 54. The report contains the meat of what informed NERSA's decision and the section 34 determination. It contains contested allegations regarding the state of, costs of, and demand for nuclear technology. It addresses the models on which NERSA might contract for the nuclear energy. These are issues on

which experts and stakeholders who participated in the initial public consultation process in 2021 could certainly have made meaningful contributions. But NERSA denied them that opportunity. And it denied itself the benefit of having their expert submissions when it had to decide whether the Minister had met its conditions and whether it should give its final concurrence to the section 34 determination.

- 55. NERSA's undated analysis of the Minister's report reveals the substantive nature of the Minister's report and how NERSA took a substantive decision after receiving this report. NERSA's analysis considers the following:
  - 55.1. The high cost and developmental status of SMRs. NERSA appears to reject or question the Minister of Energy's suggestion that South Africa procure and construct SMRs (pg 1278; CL 16-1293).
  - 55.2. The demand for nuclear energy after 2030. NERSA considers how the Minister's purported "demand analysis" lacks "clarity" and "insight" (pg 1279-80; CL 16-1294–5). Nevertheless, NERSA concludes that the report demonstrates that nuclear energy would "meet demand post 2030, based on the envisaged decommissioning of 24 000MW of baseload coal" (pg 1279; CL 16-1294).
  - 55.3. The cost and affordability of nuclear energy. NERSA concludes, after considering (only) the Minister's estimates, that nuclear energy is "one of the most cost-effective energy solutions available" (pg 1281; CL 16-1296).

- 55.4. The pace and scale of the procurement. NERSA decides that procuring 2500MW of nuclear energy would be an opportunity to develop the skills for larger nuclear projects in the future (pg 1282; CL 16-1297).
- 55.5. The contracting model. NERSA appears to walk back from its EPC requirement, deciding that the Department is best placed to decide on the "most optimal construction model" (pg 1283; 16-1298). However, NERSA does not formally or explicitly withdraw or seek to withdraw the EPC condition it imposed on the procurement of nuclear power (which I refer to as the EPC procurement restriction in the founding affidavit). Indeed, its record makes clear that it took the view that the conditions it set when suspending its concurrence could not be revisited. And, in its meeting of 30 August 2023, it took no decision to withdraw this condition. In NERSA's view, all it was required to do was determine whether the Minister met (or would comply with) the conditions. But plainly the Minister indicated that the Department would not comply with the EPC procurement condition. Yet, NERSA inexplicably (and plainly irrationally and unlawfully) found that its conditions (including the EPC procurement condition) were all complied with.
- In sum, the record shows that critical aspects of the section 34 determination—
  like the costs, demands, and pacing relating to nuclear energy—were addressed and considered by NERSA and the Minister only after the public consultation process. The public and stakeholders (including experts, independent research institutions, and specialised organs of state) never got a chance to comment on these aspects of the section 34 determination, as

motivated and considered by the Minister. They never had the chance to comment on why, for instance, the Minister thought nuclear energy was affordable, was necessary to meet demand, and how it should be procured.

- 57. Had that opportunity been provided, critical information from stakeholders may have been made available, including, as but two examples: the President's Energy Action Plan announced in July 2022 (SFA5), and Eskom's Generation Recovery Plan dated January 2023 (SFA6).
  - 57.1. There is no mention of these plans in the report by the Minister of Energy to NERSA, or how those plans agreed to by government after consultation with Eskom and other stakeholders (labour federations, businesses, experts in the energy sector, amongst others) would align with the Minister's request to NERSA to concur in a section 34 determination as regards the supposed energy gap and the means to fill it.
  - 57.2. The President's Energy Action Plan makes no mention of nuclear energy to meet South Africa's energy demands, and Eskom's Generation Recovery Plan speaks to the multiple different strategies adopted by Eskom to increase generation capacity all of them carefully laid out, and with no mention of nuclear either, and with a clear focus inter alia on renewable energy
  - 57.3. There is also no consideration by the Minister of Energy or NERSA of how the budget for nuclear would align with the key interventions identified in the Energy Action Plan, for example that National Treasury

would provide a sustainable debt solution to Eskom, or how Eskom's other budgetary commitments squared with the fact that Eskom – according to the Minister of Energy's nuclear plans – would be the generator and buyer of electricity from the new nuclear power plants.

- 58. NERSA, by its irrational and unfair process, deprived itself of the benefit of these stakeholders' expert submissions in response to the Minister's report.
- 59. This is patently unfair and procedurally irrational. A meaningful opportunity to submit representations entails being in a position to present and controvert evidence in a meaningful way. NERSA was under an obligation to disclose adverse information and adverse policy considerations and give the public (including stakeholders and experts, such as Eskom, the CSIR, and the UCT's Energy Systems Research Group) an opportunity to respond to the Minister's submissions. NERSA should at least have informed the public that the Minister had given NERSA reasons to concur with the section 34 determination, and afford the public the opportunity to overcome those reasons.
- 60. Moreover, while it was patently unfair and procedurally irrational not to afford the public, including the various stakeholders, the opportunity to make submissions on the Minister's report, in its "analysis" of the Minister's report, NERSA does not even refer to the public submissions it had received in 2021, two years prior to the Minister's report, *once*. Most strikingly, NERSA never compares, and addresses the differences between, the Minister of Energy's cost analysis and the cost estimates provided by stakeholders.

## (ii) The length of time

- 61. The record confirms that NERSA should have afforded the public an opportunity to comment on the Minister's report, given the length of time between the public consultation process (February 2021) and the report (August 2023).
- 62. First, the Minister's report relies on new advances in nuclear technology (specifically SMRs) that postdate the public consultation process (pg 1229; CL 16-1234). The public never got an opportunity to address NERSA on the merits or demerits of these advances, which even NERSA accepts are not commercially operational and could be very expensive (pg 1278; CL 16-1293).
- 63. Second, the Minister was advised by his own legal director that the length of time rendered the section 34 determination susceptible to challenge (CL 15-570).
- 64. Third, the record does not reveal why the Minister took over two years to respond to NERSA's conditions. The only document the Minister produced in the intervening two years was a letter to Earthlife and SAFCEI, dated 3 March 2022, in which he assured the NGOs that NERSA would allow a public consultation process (of course, the Minister was wrong; as already emphasised, NERSA did not invite any submissions on the Minister's report in 2023). The only inference is that responding to NERSA was not urgent or a priority for the Minister. If that is so, then there is simply no reason why NERSA could not have invited public comments on the Minister's report. An additional period for further comments, of between three to six months, would not have

caused any prejudice to the Minister of Energy (who took two years to address NERSA's conditions).

# (iii) Changes in the energy landscape

- 65. The DA's founding affidavit explains various changes in the energy landscape that occurred between February 2021 (when the public consultation process ended) and August 2023 (when the Minister presented his report) (FA at para 132).
- 66. The record confirms that there were material changes to the energy landscape in South Africa in the intervening two years. As the Minister's legal director put it, "intervening developments" meant that the section 34 determination was susceptible to review (CL 15-570).
- 67. These intervening developments are borne out in the Minister's report on NERSA's conditions. He references—
  - 67.1. new advances in nuclear technology that postdate the public consultation process (pg 1229; CL 16-1244);
  - 67.2. the 11.2% decline in energy consumption in 2021 compared to the demand projected by the IRP2019 (pg 1251; Cl 16-1266);
  - 67.3. the radically declining EAF of 61.8% in 2021, compared to the 75.5% assumed by the IRP2019 (pg 1255; CL 16-1270);
  - 67.4. the decision of the Department of Forestry, Fisheries, and the Environment (**DFFE**) in November 2021 not to approve the emissions

- standards of various coal power stations, resulting in a possible loss of 46 000MW by 2025 (pg 1256; CL 16-1271);
- 67.5. various plans produced by Eskom in 2021 and 2022 relating to electricity supply and transmission (pg 1266;); and
- 67.6. various plans developed by the Department in 2022 relating to the mining industry (pg 1266; CL 16-1281).
- 68. All these developments, like the ones listed in the DA's founding affidavit (at para 132) directly impact the section 34 determination. A fresh consultation process would have allowed NERSA to receive comments on these changes and their impact on the section 34 determination. But NERSA, unfairly and irrationally, disallowed comments on the Minister's determination and his further submissions considering these material developments.

# (iv) Further reasons for procedural unfairness and irrationality

- 69. The record discloses eight further reasons for why NERSA adopted an unfair and irrational procedure.
- 70. First, numerous stakeholders, in their comments, requested further information from NERSA and the Minister. Stakeholders repeatedly bemoaned how they could not properly comment on the section 34 determination without data from the Minister and NERSA regarding issues like costs and demand. Examples of stakeholders who requested further information include:

- 70.1. The Helen Suzman Foundation at page 499 (CL 16-514): "the ministerial determination makes no mention of the research on which it is based. It provides no background at all as to why a decision was reached on the appropriateness of additional nuclear power after 2030, or on the reasons for the apparent exclusion of cheaper options, such as renewable energy".
- 70.2. The South African Institute of Electrical Engineers at page 510 (CL 16-525): "Clearly therefore the impact can only be assessed using the actual data from the RFP, but there may be a good indication from the RFI".

  The RFI responses have not been made public.
- 70.3. Eskom at page 517 (CL 16-532) explains that the IRP2019 requires revision and does not provide guidance on how nuclear energy will form part of the energy mix. Eskom further advises that National Treasury should advise on whether South Africa can afford the procurement (pg 528). Eskom then explains at page 530 (CL 16-545) that "[t]he cost can only be determined by detailed modelling once the input parameters are known".
- 70.4. The CSIR at page 648 (CL 16-663) submits that there was no "unconstrained least-cost scenario published for comparison to Policy Adjusted IRP 2019 outcomes (with specific emphasis on cost impacts of key decisions published)".
- 70.5. Meridian Economics at page 690 (CL 16-705) recorded that "[t]he decision to procure nuclear power is not supported by the (adjusted

least-cost optimization) analysis presented in the IRP 2019, nor is it supported by similar studies of the South African power system available in the public domain".

- 70.6. SAFCEI and Earthlife at page 756 (CL 16-771) raised the issue of inadequate information in their public comment.
- 70.7. BUSA at page 842-3 (CL 16-857-8) urged NERSA to provide further information, including a recent cost and feasibility study and the RFI responses. BUSA points out that the public consultation process is premature without these studies and responses. It emphasises the "need for social partners to be placed in a position to make an informed decision on the pace and scale that the country can afford any new technology".
- 70.8. The Energy Intensive Users Group of Southern Africa at page 885 (CL 15:900) wrote:

"In the absence of sufficient evidence or analysis in the IRP 2019 to substantiate the DMRE claim that investment in 2500MW of nuclear capacity is a 'no-regret' option for South Africa in the long-term, we cannot support the ministerial decision to commence the process to procure 2500MW of nuclear power (in response to Question 33). We believe that the decision whether to commence with nuclear procurement should be postponed until the IRP 2019 is updated and extended."

71. NERSA, in its reasons for suspending its concurrence, acknowledged that stakeholders required further information (pg 1401; CL 16-1416). NERSA even

says that it "notes the concern regarding making this determination in the absence of actual costs" (pg 1388, emphasis added). Despite these acknowledged requests for further information, NERSA failed to provide the information to stakeholders for comment when NERSA received that information from the Minister.

- 72. Second, the Minister of Energy and NERSA provided the public with inadequate information regarding the section 34 determination. NERSA simply published a consultation paper asking the public questions in respect of the IRP 2019. The Minister of Energy never revealed why he proposed to procure 2500MW of nuclear energy. He never explained his thinking or assumptions. The public was made to comment on his proposed determination in the dark.
- 73. The Minister only revealed his thinking *after* the public consultation process. In presentations on 24 February 2021, a "response" dated 10 March 2021, and in his report of 20 July 2023, the Minister explained why he believed the determination was in the public interest. But there was no reason why the Minister did not make his reasoning known before the public consultation process began, to allow stakeholders and experts to respond.
- 74. Third, this is no ordinary procurement process.
  - 74.1. The section 34 determination sets in motion a process that will cost almost *one trillion* rand.
  - 74.2. The Minister of Energy says the procurement will cost around R130 billion, excluding capital costs (pg 1240; CL 16-1255).

- 74.3. Eskom provides a more realistic figure. Eskom estimates the procurement will cost a low of R500 billion and a high of R800 billion (pg 528; CL 16-543). This figure includes the financing costs as well as construction costs. Eskom's estimate is based on a conversion rate of R15.6 to the US dollar. At today's rate of R18.00 to the US dollar, the costs are between **R580 billion** (as a low) and **R920 billion** (as a high).
- 74.4. As the CSIR put it at page 607 (CL 16-612), "[t]he level of investment in one procurement programme is unprecedented in South Africa". The CSIR also points out that globally nuclear construction on average costs

  2.2 times the original budget (pg 632; CL 16-647).
- 74.5. So, the section 34 determination will likely give rise to a procurement process worth significantly more than **one trillion rand**.
- 74.6. In addition to this unprecedented cost, a nuclear procurement process lasts *years*. The best-case scenario is a ten-year timeline. This is no short-term contract, but a process that requires years' long commitment from South Africa. This is a cost that will have to be borne by electricity consumers either through significantly (and unaffordable) higher tariffs or the inevitable tax increases to fund the extraordinary levels of debt that will be required to be taken on by the government (directly or through government guarantees). In fact, even Eskom says the following in its submissions:

"with Eskom's current levels of debt, and with no clear tariff trajectory that will enable a reduction of this debt, any additional debt burden on

Eskom, be it directly or indirectly, would be unmanageable. As Government guarantees are likely to be a pre-requisite to the funders, the fiscus would be exposed to an immediate real risk of Eskom default.

Furthermore it is questionable whether the country could afford the increase in debt levels (SA's debt to GDP would deteriorate further with consequential negative impacts on the country and economy), whether the Single Buyer would be able to carry the payment obligation in terms of energy produced and whether consumers could carry the burden of the increased tariffs that would arise. Any consideration of ensuring priority of payment of the obligation that would arise would impact on current debt covenants, IPP commitments etc." (CL 16:550)

"The Buyer, regardless of where it is located, will be faced with the risk of having to perform in terms of payment to the nuclear plant and with the huge risk of non-collection of debt from customers. Default is almost likely." (CL 16:552)

- 74.7. To be clear, I do not suggest that the determination was unlawful merely because it sets in motion a costly process. Instead, the point I make is that given the enormous cost, and the impact of this procurement process on the fiscus and the public, a meaningful and robust consultation process was especially important.
- 75. Fourth, NERSA had nothing before it when it began the public consultation process. The Minister of Energy gave NERSA his (signed) determination and asked NERSA to "confirm" its concurrence. The Minister failed to provide NERSA with any underlying reasoning for the determination, including research or reports conducted by his Department. NERSA was entirely in the dark when it conducted its public consultation process. It had no idea what it should look

out for in the public comments, and what the public should address. NERSA concedes as much in Addendum A, where it notes that NERSA needed to develop guidelines on the minimum information required from the Department to allow NERSA "to adequately analyse the determination" (CL 16-1520). In those circumstances, when NERSA finally received the Minister's reasons (after the public consultation process), NERSA should have made those reasons public and asked for comment.

- 76. Fifth, and relatedly, NERSA never *asked* the Minister for further documents before or during the public consultation process. NERSA was content to invite public comments, and decide on the concurrence, with nothing but the one-page determination. The Department of Energy even *offered* NERSA further documentation during the consultation process (CL 15-215-216) and referred to various further documents underlying the draft determination (CL 15-190)—but NERSA never took up the opportunity. Nowhere in the records—which together span over 2000 pages—is there an explanation for why NERSA never asked the Minister for his reasons *before* inviting public comments.
- 77. Sixth, NERSA's reasons for suspending its concurrence were linked entirely to comments raised by the public. NERSA's reasons for suspending its concurrence record that it imposed its suspensive conditions "to address the concerns" raised by stakeholders (pg 1402; CL 16-1417). NERSA's failure to revert to the public for comments on whether the conditions were satisfied (particularly given that to make this determination required a detailed and substantive factual assessment) is thus unfair and irrational. NERSA did not consult the very stakeholders (including organs of state like Eskom and CSIR

and independent expert institutions like the UCT's Energy Systems Research Group) whose concerns gave rise to the conditions, on whether the Department satisfied those conditions that directly impacted upon their interests. It did not even consult Eskom, the generator of the nuclear capacity under the determination.

- 78. Seventh, not only did the public (including stakeholders such Eskom and the CSIR) not get a chance to comment on the material aspects (only disclosed in the Minister of Energy's report of July 2023) of the section 34 determination, but also NERSA ignored the earlier comments it did receive that were relevant to the issues raised by the Minister in his report. NERSA *never* referred to the public comments when it analysed the Minister's report and decided that the Minister of Energy complied with NERSA's conditions.
  - 78.1. Perhaps the most striking example of this is NERSA's analysis of the Minister's cost estimates. NERSA, in three terse paragraphs, concludes that the Minister has demonstrated that nuclear energy is affordable (pg 1281). I return to this reasoning in detail below.
  - 78.2. The point is that NERSA, when analysing the Minister's cost estimates, did not even consider the numerous studies presented to it by independent experts demonstrating that nuclear is not the least-cost option. These studies are summarised in a public submission made by the University of Cape Town's Energy Systems Research Group at page 903 (CL 16:918).

- 78.3. Of course, in a fair and rational process, NERSA would have called for submissions after receiving the Minister's report, and prior to concurring in the determination, so that stakeholders, such as CSIR, Eskom, and Energy Systems Research Group, could have commented directly on the Minister's cost estimates, and assisted NERSA in arriving at the best decision in the circumstances.
- 79. Lastly, and perhaps most importantly, NERSA never gives a reason for why it failed to consult the public on the question whether, in the light of the Minister's report, the conditions were satisfied. The Minister submits his report on 1 August 2023. At some point in August 2023, NERSA analyses it. In meetings of 25 and 30 August 2023, NERSA decides to concur with the Minister's determination. Nowhere does NERSA even consider the possibility of consulting with the public. NERSA recorded no reason against consulting the public (including all the various stakeholders, such as Eskom, CSIR and the independent experts, who had initially made submissions in 2021). There was none. The failure to do so was plainly procedurally unfair and irrational.

## (B) THE MINISTER OF ELECTRICITY RUBBERSTAMPED

- 80. From 26 May 2023, only the Minister of Electricity was empowered to consider, consult with NERSA to obtain its concurrence, and decide to issue section 34 determinations.
- 81. The DA's ground of review has three components:

- 81.1. First, that the Minister of Energy acted *ultra vires* in finalising the process of obtaining NERSA concurrence, between 26 May and September 2023, when he had no power to do so;
- 81.2. Second, that NERSA acted unlawfully by consulting with and concurring in a determination by the unauthorised Minister of Energy; and
- 81.3. Third, that the Minister of Electricity, instead of applying his mind to whether he should issue the section 34 determination, rubberstamped the Minister of Energy's decision to issue the section 34 determination
- 81.4. The net result is that the Minister of Energy—the wrong minister—in fact took the decision to issue the section 34 determination (Founding Affidavit at para 139).
- 82. The Ministers' records support the DA's ground of review.
- 83. First, the Energy Record reveals that the Minister of Energy unlawfully continued to consider and drive the section 34 determination (including the necessary consultation with NERSA to obtain concurrence for the terms and gazetting of the determination) *after* 26 May 2023. This suffices to set aside the determination. From 26 May 2023, the Minister of Energy could no longer exercise any control over a section 34 determination process. The President had removed that power from him and allocated it to the Minister of Electricity. Nonetheless, without having any authority to do so, the Minister of Energy—

- 83.1. compiled and/or finalised a report on compliance with NERSA's conditions between 26 May and 20 July 2023;
- 83.2. submitted a report on compliance with NERSA's conditions on 20 July 2023;
- 83.3. corresponded with NERSA regarding NERSA's decision to concur with the determination on 12 September 2023;
- 83.4. decided to "transfer" the section 34 determination to the Minister of Electricity only on 2 November 2023; and
- 83.5. urged the Minister of Electricity to "accept" the determination as made by the Minister of Energy as a *fait accompli* and publish it in the government gazette, in a letter dated 2 November 2023 and a presentation dated 24 November 2023.
- 84. The Minister of Energy submitted his report to NERSA without consulting with the Minister of Electricity—whose office bore the authority to drive and issue section 34 determinations and to reach consensus with NERSA. The Minister's records imply that the Minister of Electricity had no knowledge of the conditions that NERSA placed on the determination or of the fact that the Minister of Energy submitted a report to NERSA about the determination and NERSA's conditions, until months after the fact (when the Minister of Energy wrote to him on 2 November 2023 and DMRE made a presentation to the Minister of Electricity on 24 November 2023).

- 85. Second, NERSA's record reveals that NERSA considered the Minister of Energy's report in August 2023. But at the time, the Minister of Energy had no authority to consult with NERSA in order to reach consensus on the terms of the section 34 determination and its issuance. Again, this suffices to set aside the determination. NERSA consulted and considered the representations of a minister who had no authority to issue a section 34 determination. From 26 May 2024, in terms of section 34 (read with the Presidential proclamation), it was the Minister of Electricity who was empowered to, in consultation with NERSA, make the determination. But, between May and September 2023, NERSA was not in consultation with the Minister of Electricity in respect of the section 34 determination. It was in consultation with the Minister of Energy! NERSA may as well have consulted with the Minister of Tourism or the Mayor of eThekwini. Its decision was irrational and materially tainted by an error of law.
- 86. NERSA also failed to consider the views of the Minister of Electricity—the *right* Minister—and considered the views of the Minister of Energy—the *wrong* minister. Concomitantly, the Minister of Energy's pursuit of section 34 consultations with NERSA during this period by submitting the report to NERSA in July 2023 (to convince it of the need for nuclear power, and to reject the EPC procurement restriction) and by corresponding thereafter with NERSA, without the Minister of Electricity's knowledge or approval was *ultra vires* and unlawful. NERSA sought input and engaged with a Minister who had no power to concur with it under the section, and ignored the Minister who did have the power. This renders the gazetted section 34 determination invalid.

- 87. Third, the Minister of Electricity, who was lawfully empowered and obliged to engage in the section 34 process, was rendered a cipher. When it came to deciding to issue the section 34 determination, he failed to apply his mind. The Electricity Record discloses that the Minister of Electricity only had two documents before him when he decided to issue the determination: a letter of 2 November 2023 and a presentation of 24 November 2023. These documents constitute a wholly inadequate basis on which to issue the determination and properly exercise the power under the section in relation to a trillion Rand procurement process.
- 88. The letter of 2 November 2023 is terse.
  - 88.1. It vaguely explains that the Minister of Energy submitted the section 34 determination to NERSA, NERSA consulted the public, NERSA decided to suspend its concurrence, the Minister of Energy (after two years and after the delegation to the Minister of Electricity) addressed NERSA's conditions, and NERSA decided that the Minister of Energy satisfied the conditions.
  - 88.2. The letter provides no details as to the substance of the determination, its rationale, the public's comments, NERSA's conditions, and why NERSA decided that the conditions were met. In fact, as I explain below, the Minister of Energy did *not* meet all of NERSA's conditions. Most glaringly, it did not even purport to satisfy the EPC requirement. The letter does not disclose that the determination will precipitate the largest procurement process in South African history.

- 88.3. The letter attaches only the signed determination. There is no reference to or attachment of the numerous documents considered by NERSA or the Minister of Energy.
- 88.4. The letter provides that the Minister of Energy "transfers" the determination to the Minister of Electricity "to bring the Determination into force by publication in the Gazette". The letter, in effect, instructs the Minister of Electricity to publish the determination—without more. In other words, the letter instructs the Minister of Electricity to act as nothing more than a rubber stamp.
- 88.5. The letter also makes clear that (a) the Minister of Electricity was not previously advised by the Minister of Energy of the Minister of Energy's consultations and submissions to NERSA between July and September 2023, and (b) the Minister of Energy did not even attempt at the time to seek, nor did he obtain, the Minister of Electricity's approval. The Minister of Electricity was only advised of these engagements months after the fact, once NERSA's final concurrence, on the strength of the Minister of Energy's ultra vires submissions, was secured. The Minister of Electricity was presented with a fait accompli, and expected to and acted to rubber-stamp the section 34 determination by gazetting it.
- 89. The presentation of 24 November 2024 is similarly short on detail—certainly for a decision as important as the determination.
  - 89.1. The presentation's self-professed purpose was to "transfer" the determination to the Minister of Electricity so that he could publish it. The

presentation does not even purport to brief the Minister of Electricity on the substance of the determination. It was simply to direct him that he should publish the determination.

- 89.2. The presentation repeats exact sentences from the letter of 2 November 2023 regarding the history of the determination. There is no explanation of the rationale behind the determination, nor is there even a summary of the public's comments.
- 89.3. The presentation quotes NERSA's decision to suspend its concurrence.

  There is no explanation for why NERSA decided to suspend its concurrence. The presentation does not refer to or include NERSA's reasons for its decision.
- 89.4. The presentation notes that the Department submitted a report to NERSA, and NERSA decided that the Department satisfied the conditions of the report. The presentation omits entirely that the determination failed to comply with the EPC condition of NERSA's concurrence.
- 89.5. The presentation records: "NERSA's concurrence was only given when NERSA confirmed that their [sic] suspensive conditions were satisfied".

  I underscore this. The Department plainly understood that NERSA only truly gave its concurrence on 30 August 2023, when NERSA decided that the Department complied with NESA's substantive conditions.

- 89.6. The presentation abruptly concludes with a "recommendation" that the Minister of Electricity should publish the determination.
- 90. In turn, the Minister of Electricity "decided" to issue a *trillion rand* determination off the back of a letter and an eight-slide presentation.
- 91. This is not only a paragon of irrationality. It is a total failure to apply the mind. The Minister of Electricity simply rubberstamped the Minister of Energy's determination. He failed to consider *any* of the documents underlying the determination, accepted the determination as a done deal, and published it in the Gazette.
- 92. In its founding affidavit, the DA explained that the Minister of Electricity suggested in the publication of the section 34 determination that the determination was out of his hands (Founding Affidavit at para 142). This is an apparent attempt to circumvent the obvious illegality of his (non-)decision.
- 93. The DA stands by its submissions that such reasoning is legally and factually mistaken. If that is what the Minister of Electricity thought, as the Preamble to the section 34 determination suggests, then his decision must be set aside.
  - 93.1. As a matter of fact, NERSA only concurred with the determination in August 2023. The Department accepted as much in its presentation of 24 November 2023 (pg 585). As NERSA's Chairperson explained in NERSA's Subcommittee's meeting of 25 August 2023, NERSA needed to "evaluate" whether the Minister satisfied NERSA' suspensive

conditions (pg 1287). That "evaluation" constituted NERSA's concurrence with the determination.

- 93.2. As a matter of law, from <u>26 May 2023</u>, the Minister of Electricity could have and should have applied his mind to the section 34 determination before publishing it. He was the only executive official empowered to do so.
- 93.3. As emphasised already, it was the Minister of Electricity, in terms of section 34, who was empowered and required to consult with NERSA to reach concurrence in respect of the section 34 determination. But, unlawfully, it was the Minister of Energy that, from July to September 2023, was consulting with NERSA to secure its concurrence. The Minister of Electricity took no part in these consultations, nor was he even aware of them at the time. The Minister of Energy had no lawful power to continue the process or concur with NERSA after that power had been transferred to the Minister of Electricity. NERSA had no power to seek the concurrence of or input from the Minister of Energy. And the Minister of Electricity had no power to cure those failures and/or issue the section 34 determination in which he had played no substantive or procedural role.

## (c) THE EPC PROCUREMENT RESTRICTION

94. NERSA's concurrence with the determination came with an imposed requirement—the EPC procurement restriction. The determination needed to provide that the procurement of nuclear energy generation occurs through an

- EPC. Hence, in its reasons for its suspended concurrence, NERSA "concluded" that the procurement occurs through an EPC (pg 1405). An EPC entails engaging a single contractor, who is responsible for the project, reducing the chances of corruption, delays, and cost overruns (pg 1405).
- 95. In its founding affidavit, the DA explained that the determination was unlawful because the determination did not include the EPC requirement (Founding Affidavit at para 150).
- 96. The records confirm this ground of review.
- 97. First, the Minister concedes in his report to NERSA that the EPC restriction was not a suspensive condition—it was a "directive" (pg 1126). This concession suffices to set aside the determination. If NERSA directed that the determination must include the EPC restriction, then NERSA could only be said to have concurred in the determination if it included the EPC restriction, and the determination's failure to include the restriction therefore renders it unlawful.
- 98. Second, the Minister's report is a display of recalcitrance. After explaining the various kinds of "contractual models", the Minister records:

"The Department has taken note of the NERSA reasons to mitigate the risk for the owner to manage multi-contracts for procurement of nuclear power plant by following an EPC contracting model. The Department will take into consideration all inputs from NERSA in its analysis to arrive at the most optimal contracting model that guarantees that the nuclear new build programme is implemented at a pace and scale that the country can afford."

- 99. In effect, the Minister *ignores* the directive from NERSA regarding an EPC contract. He "notes" NERSA's requirement and proceeds to assure NERSA that he would "consider" its "input".
- 100. That is not how concurrence works, more particularly on the facts of this case where the procurement involved entails the largest sum of money ever involved in a public process, and where NERSA had put itself and the Minister on notice about the EPC requirement as a critical condition of any lawful determination. NERSA concurred with the determination subject to the EPC requirement. If the Minister ignores that requirement, he ignores NERSA's concurrence. The Minister cannot then proceed to promulgate (or have the Minister of Electricity promulgate) the determination. That is unlawful. Section 34 requires the Minister to have NERSA's concurrence when promulgating the determination.
- 101. Third, NERSA's "analysis" of the Minister's response flatly contradicts its EPC requirement.
  - 101.1. NERSA describes the EPC requirement as a "suspensive condition" (pg 1282). But it is not a suspensive condition. It does not suspend NERSA's concurrence subject to the Minister doing something, like conducting an analysis. It is a <u>requirement</u> of NERSA's concurrence: the Minister may only promulgate the determination if he procures nuclear energy through an EPC, and NERSA's concurrence is withheld forever and a day until such time as the condition is met.
  - 101.2. NERSA may have suspended its concurrence in other respects (like pending a costs and demand analysis). However, on this score, NERSA

made a final, binding decision: the procurement needed to occur through an EPC. I refer to what I have stated in paragraphs 82, 83 and 91 of the founding affidavit: in summary, the terms of NERSA's decision of August 2021 to impose conditions on its concurrence make clear that the EPC procurement restriction (or condition), which NERSA imposed, was intended to and was an ongoing requirement (or condition) on the procurer. It limited the power of the procurer when determining the procurement process. Plainly, it was intended to and should have been included in the final gazetted determination.

- 101.3. But even if somehow the EPC procurement restriction could be construed as a true "suspensive" condition (as opposed to an ongoing condition that should have formed part of the gazetted section 34 determination), which needed to be fulfilled before NERSA would grant concurrence for the section 34 determination to be gazetted, then it could only be "fulfilled" by the DMRE, as the designated procurer, giving a binding undertaking that it would only procure by way of an EPC. But that is precisely what the DMRE refused to do in the Minister's report.
- 101.4. NERSA, in a volte face, reasons that the Minister is best placed to decide on the contracting model for the procurement (pg 1283). NERSA's reasoning is inconsistent with its decision, in which it concluded that an EPC model is the best way to procure the energy. This inconsistency, at the very least, is irrational.

- 101.5. A disquieting aspect of NERSA's analysis is its conclusion that the Minister "provided enough evidence" that he will "arrive at the most optimal construction model" (pg 1283). The Minister provided no evidence. The relevant part of his report provides a generic summary of different contracting models (pg 1262-3). There is no evidence in the records that any one of these models would be better than an EPC.
- 102. There can be no suggestion that NERSA lawfully amended or repealed the EPC procurement requirement.
  - 102.1. One, factually, NERSA did not amend or repeal the EPC procurement requirement. NERSA's resolution at its meeting of 30 August 2023 is *not* that NERSA amend any of its conditions. NERSA's decision on 30 August 2023, based on the analysis, is that the Minister of Energy "complied" with NERSA's suspensive conditions. NERSA never purported to change the EPC procurement restriction. Instead, it irrationally and unlawfully construed the EPC procurement restriction as a "suspensive condition" complied with by the Minister.
  - 102.2. Two, even if NERSA had amended or repealed (and could amend or repeal) the EPC requirement (and there is no decision in the record to do so or power to which NERSA refers by which it could do so), then NERSA's amendment would be procedurally unfair. NERSA imposed the EPC requirement in direct response to public comments. NERSA publicised in its reasons that its concurrence was subject to the EPC requirement. If NERSA were to change its mind, then NERSA would at

least need to notify the public that it has amended or repealed a part of its decision. It cannot change the terms of its concurrence without any notice.

102.3. Three, on NERSA's version, it signalled its final concurrence in the section 34 determination in August 2021 – subject to the fulfilment of certain conditions. But if NERSA is correct, then in respect of the EPC procurement restriction in particular, NERSA had made a final decision. NERSA was bound by that final decision. NERSA ignored that decision—unlawfully.

# (D) NO DEMAND AND COST ANALYSIS

- 103. In its founding affidavit, the DA alleged that the Minister of Energy failed to comply with NERSA's condition that he conduct a demand analysis (Founding Affidavit at para 152).
- 104. The records not only confirm that the Minister of Energy failed to comply with NERSA's requirements regarding a demand analysis, but the records also reveal that the Minister failed to comply with NERSA's requirement regarding the costs of nuclear energy.
- 105. In its reasons for the decision to suspend its concurrence, NERSA explained:
  - 105.1. The IRP 2019 requires the procurement of nuclear energy at a "pace and scale that the country can afford". The Minister of Energy's draft determination "lacked clarity" on the proposed costs, timing and scale of the new nuclear energy build (pg 1401). So, before NERSA would agree

to the Minister's determination, NERSA required the Minister of Energy to expound on the pace, scale, and costing of nuclear energy (pg 1402).

- 105.2. The IRP 2019 only addresses South Africa's energy demands until 2030 (pg 1403). But nuclear energy would address energy demands well beyond 2030. NERSA thus required the Minister of Energy to conduct a demand analysis for post 2030 before NERSA would agree to the determination.
- 106. A necessary implication of NERSA's decision to suspend its concurrence is that the Minister of Energy needed to return to NERSA with new and further information to meet NERSA's concerns. NERSA decided that it could not concur with the Minister's determination based on the evidence before it regarding costs and demand. So, the Minister needed to research further the demands for and costs of nuclear energy post 2030, and return to NERSA with that new information.
- 107. The Minister, in his report of 20 July 2023, failed to do so. The Minister did not calculate the costs of and demands for nuclear energy off any new data. He relied on data that was before NERSA when NERSA took its decision to suspend its concurrence, but which NERSA had decided was insufficient to estimate costs and demands.
- 108. To predict the costs of 2500MW of nuclear energy, the Minister's report relies on two sources of information:

108.1. the IRP 2019 (pg 1234); and

- 108.2. the responses to the Minister's RFI of 15 June 2020 (pg 1235).
- 109. But these are not new sources of information. The Minister relied on these exact sources in his report to NERSA two years earlier—on 10 March 2021 (pg 219). In that report, the Minister invoked the IRP 2019 and the responses to the RFI to motivate to NERSA that nuclear energy was affordable and the least-cost option. The Minister also relied on these two sources when he accounted to Parliament on the responses to the RFI, and the projected costs of nuclear energy, on 23 February 2021 (pg 152).
- 110. The Minister could not return to NERSA with the same data. The rationale behind NERSA's condition was that the Minister must present *further* and *new* information on the costs of nuclear energy. But after two years of silence (more than enough time to commission and/or prepare a proper demand analysis based on the latest information), the Minister reverted to NERSA with the same (now outdated) information he had already presented to NERSA. He did not conduct new or further investigations into the costs of nuclear. He did not present more recent sources for the costs of nuclear energy. Presented with the same information two years later, NERSA simply could not have reasonably and rationally satisfied itself that its concerns regarding the costs of nuclear energy had been satisfied.
- 111. The same is true for the Minister's demand analysis. The IRP 2019 does not consider South Africa's energy demands beyond 2030. In its reasons, NERSA provided that the Minister could not rely on the IRP2019 to project demand beyond 2030. But that is what the Minister did. In his report of 20 July 2023,

the Minister provides a graph forecasting demand to 2050 based entirely on the IRP 2019 (pg 1250). He does not invoke a source for projected energy demands beyond 2030 other than the IRP 2019.

- 112. So, the Minister did not comply with NERSA's conditions. He did not expound on the costs of nuclear energy. He did not present a demand analysis. He just repeated the representations he made two years earlier, relying on the IRP 2019 and the 2020 RFI.
- 113. NERSA's decision that the Minister did comply with NERSA's conditions is irrational.
- 114. With respect to costs, NERSA's analysis of the Minister's estimated costs bears no relationship to the purposes behind NERSA's suspension of its concurrence.
  - 114.1. In two paragraphs, NERSA summarises the Minister's nuclear energy cost estimates compared to other sources of energy (pg 1280).
  - energy is it safe" (<a href="https://springpowerandgas.us/the-pros-cons-of-nuclear-energy-is-it-safe/">https://springpowerandgas.us/the-pros-cons-of-nuclear-energy-is-it-safe/</a>). Based on this page, NERSA concludes that nuclear energy is cheaper than coal and gas, and nuclear energy is not as exposed to inflation (pg 1281; CL 16-1296). The DA's legal representatives attempted to access this webpage but it appears that the webpage does not exist. From its address, it appears the webpage is run by an American energy company (whose details could not be uncovered). The Minister of Energy never relied on this webpage. None

of the public comments received by NERSA relied on this webpage. It appears NERSA invoked this page on its own initiative, without consulting the public or the various experts that made submissions to NERSA.

- 114.3. NERSA, it appears, simply "googled" whether nuclear energy is safe and affordable, and decided based on its results that it is.
- 114.4. NERSA concludes: "NERSA therefore agrees that the country cannot afford not to include nuclear in its generation mix post 2030" (pg 1281; CL 16-1296). NERSA missed the point. The issue it needed to decide was not whether South Africa can afford to exclude nuclear energy from its sources of power. This is a moot question. South Africa already has nuclear energy. The issue, as set by NERSA's condition, was whether South Africa could afford 2500MW of new nuclear energy. NERSA, in its analysis of the Minister's report, does not even consider this question.
- 115. As for the demand analysis, NERSA relies only on the Minister's IRP 2019 graph to conclude that the Minister provided a demand analysis (pg 1279; CL 16-1284). NERSA records (pg 1279; 16-1284):

"In NERSA's opinion, the study conducted in this section covers a thorough demand analysis up to 2050 and the envisaged load profile post 2030, which is depicted in Table 4.4 of the report that shows the sectoral-based demand projections." (emphasis added).

116. This is irrational. In the preceding paragraph, NERSA explains:

"The purpose of this suspensive condition was to establish rationality behind the 2 500MW nuclear capacity, seeing that the IRP2019 does not prescribe a definite figure but envisages that a study would need to be conducted to derive the appropriate generation mix needed to meet the envisaged demand post 2030." (emphasis added).

- 117. NERSA's reasoning can only be described as doublethink. NERSA decided that the IRP 2019 cannot be used to project demand post 2030. At the same time, NERSA decided that the Minister's exclusive reliance on the 2019 IRP to project demand to 2050 constitutes a "thorough demand analysis".
- 118. Accordingly, the Minister failed to comply with NERSA's conditions for a cost and demand analysis of nuclear energy. NERSA's irrational conclusion to the contrary requires the setting aside of NERSA's concurrence and the section 24 determination.

## (E) BASELOAD AND IRRATIONALITY AND UNREASONABLENESS

- 119. Why do the Minister of Energy and NERSA want to procure 2500MW of nuclear energy?
- 120. There are two parts to their reasoning.
  - 120.1. First, from around 2030 a significant portion of Eskom's coal fleet will be decommissioned.
  - 120.2. Second, and this is the problematic aspect of their reasoning, only nuclear energy can meet the "baseload" currently met by coal.

121. The rationale is articulated clearly at page CL 15-231 of the Minsters' Records, where the Department gives an answer to a question from NERSA's Chairperson:

"[Chairperson:] If you can explain the statement that says in respect of nuclear in your presentation that it presents a no-regret option. Maybe if you can explain what that actually means?

[Department:] South Africa plans on decommissioning 24100MW of baseload coal build by 2030. This will create a level of instability on the national electricity grid, which cannot be mitigated by the introduction of variable (non-dispatchable and intermittent) renewable energy."

- 122. The Department goes on to conclude that South Africa "needs baseload generation such as nuclear on the grid to balance [variable renewable energy] and ensure security of supply of energy" (CL 15-231).
- 123. NERSA adopts this reasoning too in its analysis of the Minister's report (pg 1279; CL 16-1284). The Minister's report adopts this reasoning at page 1253 (CL 16-1268).
- 124. The assumption driving the section 34 determination is this: the constant demand for energy ("baseload") must be met by a constant supply of energy from a single source.
- 125. Superficially it may appear that this assumption has an intuitive appeal. Mines, factories, and other major industries require energy 24/7. But the sun does not shine, and the wind does not blow, 24/7. So, South Africa needs a single source

of energy that provides electricity 24/7 to match the energy required by major industries.

- 126. But any intuitive appeal is illusory and does not withstand scrutiny. The constant demand for electricity can be met with electricity from various sources, not all of which need to operate 24/7. For example, while the sun shines and the wind blows, renewable energy can meet the baseload. Then, during windless nights, other sources of energy can be deployed instead of renewables. These other sources do not *need* to be running 24/7; they can be switched off when the sun or wind generates electricity. A baseload does not need to be met by a power plant that is "always on". That is made plain by the Energy Action Plan that the Presidency announced in July 2022, referred to earlier, which includes a host of interventions, including reviving the renewable energy procurement programme to facilitate the procurement of new generation capacity from renewables, gas and battery storage, diversifying generation by allowing parties other than Eskom to generate electricity (like private investors), and to use climate funding provided through the Just Energy Transition Partnership to invest in the grip and repurpose ageing coal fired power stations.
- 127. But the Minister and NERSA reductively assumed to the contrary. They assumed that baseload can *only* be met with an energy source that is always running, like coal or nuclear (although, of course, even coal and nuclear plants must have their operations suspended or curtained from time-to-time, for maintenance and due to other unforeseen circumstances). There is no reason for this assumption; it is arbitrary. A baseload can be met from multiple energy sources that collectively operate 24/7, but individually do not.

- 128. Multiple independent energy experts, including an organ of state, pointed out the flaw in the Minister's and NERSA's reasoning.
  - 128.1. The University of Cape Town's Energy Systems Research Group explained that there is no need to meet the baseload with a single energy source. Instead, "[a] systems approach to electricity planning ensures that a reliable supply of electricity is generated from complementary resources across the system, with the aim of meeting demand at lowest cost" (pg 900; CL 16-915).
  - 128.2. Professor Steve Thomas explained: "Clearly there is a base-load demand, a level of demand below which demand never goes, but it is a non sequitur to assume that base-load can only be met by base-load plants. It makes no more sense than assuming a factory operating round the clock seven days a week requires a set of workers who will also work round the clock every day" (pg 793; CL 16-808).
  - 128.3. The CSIR, the organ of state specifically tasked with scientific and technology research in order to foster socio-economic prosperity, submitted that "it is not consistent with energy planning best practices to assume base-demand must be met with base-supply" (pg 620; CL 16-635).
  - 128.4. Meridian Economics explained that previously energy systems met the baseload with plants running at capacity for economic reasons. It was cheaper to have these plants "always on", instead of switching them on and off. However, there is no "inherent technical requirement" for

baseload to be met by an energy source that can constantly supply power (pg 704).

- 129. The Minister and NERSA, irrationally and unreasonably, assumed that coal can only be replaced by a source of energy capable of producing electricity 24/7. The upshot of their assumption is that the Minister and NERSA (for no reason) decided to *exclude* the possibility of using renewable energy (along with other sources of energy) to meet baseload. This suffices to set aside the determination.
- 130. To be clear, the DA is not suggesting that this Court pronounces on how South Africa structures its energy mix. The DA is also not suggesting that South Africa can never procure nuclear energy. But when deciding whether to concur in the determination, NERSA was dutybound to act in the public interest and rationally and reasonably (and not to base its decision on erroneous facts or irrelevant considerations, and not to ignore relevant considerations). NERSA failed in that duty because it assumed, for no reason, that only nuclear can meet the baseload, and renewable energy can never meet the baseload. In the context of deciding whether 2500MW of nuclear power is in the public interest, that is an irrational and unreasonable, and, thus, reviewable error.

# IV CONCLUSION

131. For these reasons, and the reasons set out in the DA's founding affidavit, the DA persists with the relief sought in its notice of motion.

KEVIN MILEHAM
I certify that on the day of JUNE 2024 and at the
above deponent appeared before me and that he acknowledged to me that he knows
and understands the contents of the above Affidavit, which Affidavit was signed and
sworn to in my presence in accordance with the requirements of Regulation No. R1428
dated 16 November 1984, as amended, which have been fulfilled.
COMMISSIONER OF OATHS



Docex 1 | Tygerberg
PO Box 4040 | Tyger Valley | 7536 | South Africa
Tyger Valley Office Park | Building Number 1 | Cnr Willie van Schoor & Old Oak Roads | Bellville
T: 021 918 9000 | 021 918 9000 (Direct Line) | F: 021 918 9070 (General) | 021 918 9070 (Direct Fax)

E: karin@mindes.co.za | www.mindes.co.za

Our Ref: DEM16/0977/E JONKER/ks | Your Ref: | Date: 29 May 2024

#### **MALATJI & CO**

Third Respondent's attorneys

Email: mmashabela@mcinc.africa

Dear Sirs

## RE: DEMOCRATIC ALLIANCE // MINISTER OF ELECTRICITY & OTHERS CASE NO.: 2024-025786

- 1. We refer to the above application.
- 2. On 20 May 2024, the DA received a record filed in terms of rule 53 on behalf of the National Energy Regulator of South Africa (**NERSA**). The DA also received a record purportedly filed on behalf of the first and second respondents (**the Ministers**).
- 3. The following documents are mentioned in NERSA's record, but are not included in the record filed:
  - a. The legal opinion mentioned at page 1080 of NERSA's record.
  - b. "Annexure E" mentioned at page 120 of NERSA's record.
  - c. The "addendum" mentioned at page 1079 of NERSA's record.
- 4. Kindly provide the DA with these documents by no later than 17h00 on Monday, 3 June 2024.
- 5. Moreover, the Ministers' record mentions the following documents, which are not included in the record filed:
  - a. The Request for Information (**RFI**) Assessment Report mentioned at page 21 of the Minister of Energy's Report dated 20 July 2023.
  - b. The responses to the RFI, mentioned at various parts of the record, including slide 4 of the Minister of Energy's presentation to the Portfolio Committee on Mineral Resources and Energy on 23 February 2021.

Minde Schapiro & Smith Incorporated | Attorneys Notaries & Conveyancers since 1929 | Registration number 2010/025182/21



- c. The attachments to the email sent by Saandhri Naidoo on 29 September 2023.
- d. The documents listed in the table on page 3 of the Minister of Energy's "Response to Section 34 Determination NERSA Public Consultation Process".
- 6. Kindly confirm that these documents were not before NERSA when NERSA decided to concur with the section 34 determination by no later than 17h00 on Monday, 3 June 2024. Alternatively, please provide these documents by that date.

Yours faithfully

MINDE SCHAPIRO & SMITH INC.

Per·

Minde Schapiro & Smith Incorporated | Attorneys Notaries & Conveyancers since 1929 | Registration number 2010/025182/21



From: Shannon Solomon <shannon@mindes.co.za>

Sent: Thursday, June 13, 2024 6:54 PM

**To:** Mathebula Sipho <SiMathebula@justice.gov.za>; sipho mathebula <sipho.mathebula79@gmail.com>; Tebogo Malatji <tmalatji@mcinc.africa>

**Cc:** Karin Squier < Karin@mindes.co.za>; MakwatTA@eskom.co.za; jmakan@mcinc.africa;

BarnesM@eskom.co.za; RamlugS@eskom.co.za; State Attorney Pretoria

 $<\!StateAttorneyPretoria@justice.gov.za\!>; Elzanne\ Jonker\ <\!elzanne@mindes.co.za\!>; Motumisheng$ 

Mashabela <mmashabela@mcinc.africa>

Subject: DEMOCRATICE ALLIANCE // MINISTER OF ELECTRICITY AND OTHERS - CASE NUMBER

2024/025786

**Dear Sirs** 

We refer to the above matter and our correspondence dated 29 May 2024.

Kindly provide our office with your urgent response by close of business tomorrow, 13 June 2024.

Kind regards,

## Shannon Solomon | Associate

## Litigation

T: +27 21 918 9000 E: <u>shannon@mindes.co.za</u> W: <u>www.mindes.co.za</u>



Tygervalley Office Park, Building no. 1, Ground Floor, Corner Willie Van Schoor and Old Oak Roads, Bellville.

Docex 1, Tygerberg | PO Box 4040, Tyger Valley, 7536

Minde SCHAPIRO & SMITH

EXTREMELY IMPORTANT NOTICE: Due to the high risk of CYBER FRAUD and "SPOOFING", it is crucial that you telephonically confirm our banking details with our office prior to making any payment to us. We will never send an e-mail advising of a change of our banking details. Any such e-mail is an attempt to defraud. Should you receive such an e-mail, kindly contact our offices immediately.

SFA3

From: Katleho Sekati < <a href="mailto:ksekati@mcinc.africa">ksent: Wednesday, June 19, 2024 7:24 PM</a>
To: Elzanne Jonker < <a href="mailto:ksekati@mcinc.africa">ksekati@mcinc.africa</a>>

**Cc:** Tebogo Malatji < <a href="mailto:mcinc.africa">mcinc.africa</a>; <a href="mailto:siMathebula@justice.gov.za">siMathebula@justice.gov.za</a>; <a href="mailto:Shannon@mindes.co.za">Shannon@mindes.co.za</a>; <a href="mailto:sipho.mathebula79@gmail.com">sipho.mathebula79@gmail.com</a>; Karin Squier

< <u>Karin@mindes.co.za</u>>; <u>MakwatTA@eskom.co.za</u> < <u>MakwatTA@eskom.co.za</u>>; <u>Jiten Makan</u>

<jmakan@mcinc.africa>; BarnesM@eskom.co.za <BarnesM@eskom.co.za>;

 $\underline{RamlugS@eskom.co.za} < \underline{RamlugS@eskom.co.za} >; \underline{stateattorneypretoria@justice.gov.za}$ 

<stateattorneypretoria@justice.gov.za>

**Subject:** RE: DEMOCRATICE ALLIANCE // MINISTER OF ELECTRICITY AND OTHERS - CASE NUMBER 2024/025786

**Dear Sirs** 

## Please find attached herewith:

- 1. Third Respondent's Supplementary Rule 53 Record; and
- 2. Letter for your attention.

#### Kind regards,



#### Katleho Sekati | Senior Associate

**T**: <u>0110722621</u> | **M**: <u>0781667102</u>

E: ksekati@mcinc.africa | W: https://mcinc.africa

**A:** 5th Floor, The Ridge, 1 Discovery Place, Cnr Katherine Str & Rivo nia Rd, Sandton

P: Postnet Suite 104, Private Bag 9976, Sandton, 2146.

This message contains confidential information and is intended only for the intended recipients. If you are not an intended recipient you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version.



Docex 1 | Tygerberg
PO Box 4040 | Tyger Valley | 7536 | South Africa
Tyger Valley Office Park | Building Number 1 | Cnr Willie van Schoor & Old Oak Roads | Bellville
T: 021 918 9000 | 021 918 9000 (Direct Line) | F: 021 918 9070 (General) | 021 918 9070 (Direct Fax)

E: karin@mindes.co.za | www.mindes.co.za

Our Ref: DEM16/0977/E JONKER/ks | Your Ref: | Date: 29 May 2024

#### STATE ATTORNEY, PRETORIA

First and Second Respondents' Attorneys

**PRETORIA** 

Email: simathebula@justice.gov.za

Dear Sirs

## RE: DEMOCRATIC ALLIANCE // MINISTER OF ELECTRICITY & OTHERS CASE NO.: 2024-025786

- 1. We refer to the above application.
- 2. On 20 May 2024, the DA received a record purportedly filed on behalf of the first and second respondents (**the Ministers**). The DA also received a record from NERSA.
- 3. The following documents are mentioned in the records, but are not included in the records filed:
  - a. The Request for Information (**RFI**) Assessment Report mentioned at page 21 of the Minister of Energy's Report dated 20 July 2023.
  - b. The responses to the RFI, mentioned at various parts of the record, including slide 4 of the Minister of Energy's presentation to the Portfolio Committee on Mineral Resources and Energy on 23 February 2021.
  - c. The attachments to the email sent by Saandhri Naidoo on 29 September 2023.
  - d. The documents listed in the table on page 3 of the Minister of Energy's "Response to Section 34 Determination NERSA Public Consultation Process".
- 4. Kindly provide us with these documents by no later than **17h00 on Monday**, **3 June 2024**.

Yours faithfully

MINDE SCHAPIRO & SMITH INC.



Minde Schapiro & Smith Incorporated | Attorneys Notaries & Conveyancers since 1929 | Registration number 2010/025182/21







# **INTRODUCTION**

The **Energy Action Plan** is South Africa's plan to end load shedding and achieve energy security. Announced by President Cyril Ramaphosa in July 2022, it outlines a bold set of actions aimed at fixing Eskom and adding as much new generation capacity as possible, as quickly as possible, to close the gap in electricity supply.

The plan includes five key pillars:

- 1. Fix Eskom and improve the availability of existing supply
- 2. Enable and accelerate private investment in generation capacity
- 3. **Fast-track the procurement** of new generation capacity from renewables, gas and battery storage
- 4. Unleash businesses and households to invest in rooftop solar
- 5. Fundamentally **transform the electricity sector** to achieve longterm energy security

The **National Energy Crisis Committee** (NECOM) was established to ensure that the **Energy Action Plan** is fully implemented to achieve these objectives. NECOM is led by the Minister in the Presidency responsible for Electricity, Minister Kgosientsho Ramokgopa. It is overseen at a technical level led by the Director-General in the Presidency and includes more than 100 high-level officials from across government and Eskom, working closely with business and other social partners.

NECOM is working hard to remove barriers to new generation capacity and unlocking energy from many different sources, including Eskom, independent power producers, businesses and households.

This is a collective national effort to ensure South Africa has enough energy now and for the future.

# **KEY ACHIEVEMENTS IN THE PAST YEAR**



- NECOM was established to coordinate the many government agencies involved in responding to a complex energy crisis. One year on, responsibilities are well defined, and the structures for planning, oversight and problemsolving structures are fully operational.
- Accountability has been strengthened, with consistent tracking of progress and rapid resolution of challenges. This is ensuring a momentum to implementation not seen before.
- Ten fully staffed work streams have been established with clear, time-bound delivery plans to ensure prioritisation and focus.
- Strong partnerships have been established with the private sector to make available technical expertise and support delivery of the plan.

#### BUILDING COLLABORATION WITH THE PRIVATE SECTOR

The Resource Mobilisation Fund (RMF) was established by Business for South Africa following a request from the President for the private sector to help capacitate NECOM. The RMF was set up to source private sector funding to procure and then donate capacity into government, and specifically NECOM, on an expedited basis. Expertise provided to NECOM to date includes a project management office, together with specialist legal, energy modelling, and engineering expertise over a one-to-two-year period.

In addition to technical support donated by the RMF, the private sector has provided expertise and assistance in kind through the Energy Council of South Africa. This includes the deployment of specialist engineering teams to support the turnaround of four poor-performing power stations as well as to optimise the utilisation of Eskom's gas-fired peaking plants, or OCGTs.

# **KEY ACHIEVEMENTS IN THE PAST YEAR**



Fix Eskom and improve the availability of existing supply



The performance of Eskom's generation fleet is showing sustained improvement, enabling less severe load shedding than expected over the winter period.



This is due to a reduction in unplanned losses to less than 16,000 MW, from over 18.000 MW.

In addition, planned maintenance has been reduced to approximately 2,500 MW during the winter period, having executed significant maintenance in previous months.

Generation available from wind power has increased due to weather conditions in the coastal regions.

National Treasury has finalised a substantial debt relief package finalised for Eskom, totaling R254 billion, alongside debt relief for municipalities and a move towards unbundled, cost-reflective tariffs.



This is a critical step to enable Eskom to invest in necessary maintenance as well as expansion of the transmission network.

An independent technical review of Eskom's power stations is underway to diagnose challenges and provide detailed recommendations on actions to be taken.



This will support the implementation of Eskom's Generation Recovery Plan going forward.

Steps have been taken to increase the load factor of OCGTs and ensure that they can be utilised more frequently to curb load shedding.



Eskom and National Treasury have finalised a funding solution to secure supplies of diesel for the rest of the 2023 financial year, and an expert team has been deployed to address challenges with the supply of diesel to Ankerlig.

#### OBJECTIVE 1: (Continued)

Intensive work is underway to return additional units at Kusile and Medupi power stations to service on an expedited basis.



An interim solution has been found to expedite the return of Medupi Unit 4 from August 2024 to April 2024.

Kusile Units 1-3 are on track to return to service by November 2023 as planned, while Unit 5 will synchronise with the grid in October 2023 and Unit 6 in May 2024.

Eskom has introduced powerful incentives for energy saving measures through the Distribution Demand Management Programme.



The programme follows a performance contracting approach, with an incentive of R3 million/MW provided for achieved demand reduction during specified periods.

#### WHAT DO "MEGAWATTS" MEAN?

Megawatts (MW) are used to measure the output of a power plant. South Africa currently has a shortfall of approximately 6,000 MW, which is why we have to implement load shedding. Every 1,000 MW of new capacity that we add to the national grid reduces load shedding by one stage.

#### **OBJECTIVE 2:**

Enable and accelerate private investment in generation capacity



Schedule 2 of the Electricity Regulation Act was amended in December 2022 to remove the licensing threshold for generation facilities.



This is a game-changing reform to enable private investment in generation projects of any size.



Since the implementation of regulatory changes, the pipeline of private sector generation projects has increased to over 100 projects representing more than 10,000 MW of new capacity.



This will begin to connect to the grid from this year. A survey conducted by Eskom showed that the number of projects in development is even greater, at 66,000 MW.

Timeframes have been reduced significantly for regulatory approvals required by energy projects.



The following processes are being fast-tracked:

- Transmission infrastructure no longer needs an environmental permit in areas with low environmental impact.
- Environmental permits are now issued in 57 days for Strategic Infrastructure Projects.
- Registration with NERSA now takes an average of 19 days.
- Grid connection now takes six months instead of nine.
- Land-use authorisations now take 30 days instead of 90.

A One Stop Shop has been established to provide a single entry point for renewable energy projects to obtain the necessary authorisations.



This includes an online platform and dedicated capacity in Invest SA to facilitate applications, follow up regularly and ensure that maximum timeframes are adhered to.

Eskom has leased land around several power stations in Mpumalanga to developers for private energy projects.



In Phase 1, agreements have been signed for 1,800 MW of capacity to be built where transmission infrastructure is already available.

Eskom has put in place mechanisms to buy power from companies that have extra capacity available, through the Standard Offer Programme and Emergency Generation Programme.



These programmes have already unlocked close to 400 MW in immediately available power, with a further 600 MW in the contracting process.

#### **OBJECTIVE 3:**

Fast-track the procurement of new generation capacity from renewables, gas and battery storage



Government has issued a determination for more than 14,000 MW of new generation capacity to be procured from wind, solar and battery storage.



This is the remaining allocation in the Integrated Resource Plan (IRP) 2019. This will allow further bid windows to proceed on an accelerated basis.

Three projects from the risk mitigation programme are already in construction, and will connect to the grid by the end of November 2023.



An additional five preferred bidders for hybrid projects from the same programme have confirmed their intention to reach financial close within the coming months.

Power Purchase Agreements have been signed with 19 projects from Bid Window 5 of the renewable energy programme totalling 1,759 MW.



Of these, 1,009 MW have achieved commercial close (of which 784MW is already in construction) and a further 300 MW are anticipated to reach close and proceed to construction by the end of September 2023.

Six projects from Bid Window 6 with a total of 1,000 MW are on track to reach commercial close by the end of September 2023.



This will bring the total amount of new capacity under construction from the last two bid windows to over 2,300 MW.

Eskom is working to import more power from neighbouring countries, such as Botswana, Mozambique, and Zambia.



An additional 400 MW of power is already being imported from Cahora Bassa in Mozambique following the strengthening of the transmission line to South Africa.



#### **OBJECTIVE 4:**

Unleash businesses and households to invest in rooftop solar



Government has introduced special tax incentives for businesses and households who install solar and a revised bounce-back loan scheme to help small businesses go solar.



As an added benefit, you can also now sell any surplus power you generate back to the grid in certain areas.

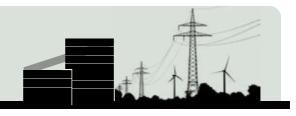
The amount of rooftop solar capacity in South Africa has increased to more than 4,000 MW, helping to reduce load shedding over the winter months.



This means that rooftop solar installations have more than doubled since the Energy Action Plan was announced – an exponential increase.

#### **OBJECTIVE 5:**

Fundamentally transform the electricity sector to achieve long-term energy security



The National Transmission Company of South Africa is being set up as an independent entity responsible for managing the national electricity grid.



This will keep the national grid in state hands, but create a level playing field to allow for more private sector participation.

New legislation has been tabled in Parliament to create a competitive market for electricity – the Electricity Regulation Amendment Bill.



In the future, this will allow consumers to choose which energy supplier they want to buy power from, and enable competition and efficiency from multiple electricity generators. The Bill was formally tabled in Parliament on 20 July 2023.

#### **REASONS FOR HOPE**

Load shedding is causing extreme frustration and hardship for all South Africans. It makes it difficult to go about our daily lives, and places a heavy burden on small and large businesses. However, while it cannot be fixed overnight, there are good reasons to hope that load shedding will be reduced and eventually made a thing of the past:



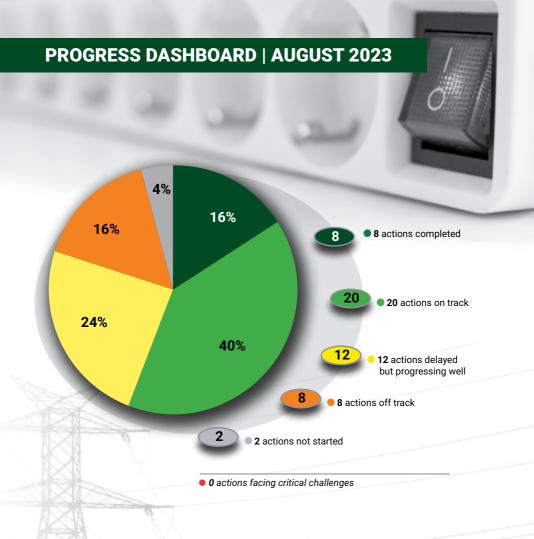
Return of units at Kusile and Medupi power stations to service: There are
currently three units at Kusile and one unit at Medupi out of service. Taken
together, these units represent more than 3,000 MW of capacity that is
currently offline – or four stages of load shedding. Kusile Units 1-3 will return
to service in November 2023, and Medupi Unit 4 will return in April 2024. This
will ease load shedding by the end of 2023.



Rapid rollout of rooftop solar: The amount of rooftop solar installed by
businesses and households across South Africa has more than doubled in the
year since the Energy Action Plan was announced by President Ramaphosa.
New tax incentives and innovative financing mechanisms are helping to drive a
boom in rooftop solar, bringing down load shedding significantly.



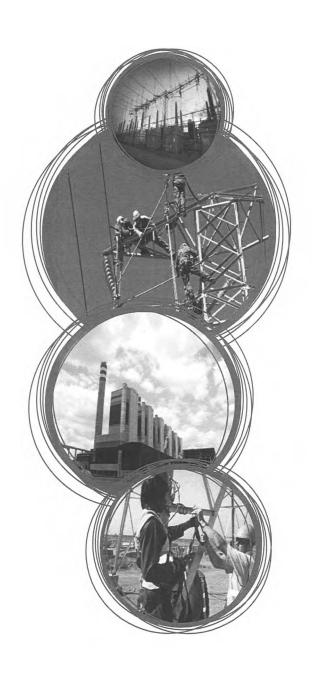
Private investment in electricity generation: The regulatory changes
implemented through the Energy Action Plan have opened the space for
private investment in large-scale electricity generation projects for the first
time. Hundreds of projects are now being developed across the country,
without needing any money from government. These projects will make the
biggest difference in bringing an end to load shedding, while also helping to
shift South Africa towards cheaper, greener energy sources.







# SFA6





## **Generation Recovery**

January 2023



13-528

## Table of Contents

1	Executive Summary	3
2	Introduction	
3	Key Assumptions and enablers	
3.1	Key Assumptions for Generation Recovery Plan	
3.3	External Enablers	
4	The Plan to End Load Shedding	
4.1	The Roadmap to Resolving Load Shedding	REGISTRAR OF THE HIGH COURT OF SOUTH AFRI GAUTENG DIVISION, PRETORIA  Pryspa Bar X67, Profess 0001
4.3	Additional Capacity	
4.4	EAF Recovery	
4.4.1	Action Plans	PRETORIA 9
4.4.2	Focus areas	
4.4.3	Challenges	
4.4.4	Levers	
4.4.5	System Status	
4.4.6	Conclusion to EAF Recovery	
4.5	Additional Capacity	
4.5.1	Potential Additional Capacity	
4.5.2	Feed in Tariffs	
4.5.3	Rooftop PV	
4.6	Addressing Grid capacity constraints	
4.7	Key enablers	
4.7.1	Financial Sustainability	
4.7.2	Government enablers	
5	Conclusion	30

Arl

KJ

Page: 3 of 30
---------------

## 1 EXECUTIVE SUMMARY

Eskom is patently aware that the performance of the Generation fleet is unacceptable with EAF less than 60%. The challenge of major incidents is a concern and are a major contributor to the poor availability. Failures at Medupi 4, Kusile 1-3 and Kusile 5, together with back-to-back long outages at Koeberg means that over 4 500 MW will be offline for an extended period.

A number of new private power generation projects are expected to come online with a cumulative capacity of 13 GW. In addition, there is significant potential – over 10 000 MW.by. 2030 - for additional capacity from rooftop PV.

Generation Operational Recovery Plan has, so far, not arrested the decline but the plan is geared towards improving EAF from the current 58% to 65% by the end of FY24 and at least 70% by the end of FY25. The target is to recover 1 862 MW in FY23 and ~6 000 MW in the next 24 months with an intensified effort at Top 6 stations.

Each station has detailed recovery plans and, starting with the Top 6 stations, these are being centrally monitored and the tracking of related actions is being implemented and this process will be automated. The plans will be stress-tested by independent consultants reporting directly to Board. Eskom has regrouped efforts to focus areas and levers to improve people, plant and process performance – these are essential levers for a sustainable improvement.

Primarily due to system and budget constraints, outages continue to be deferred or cancelled, including those on the Top 6 stations. These constraints correctly result in priority being given to Safety & Statutory outages over reliability and performance improvement projects.

The system outlook shows significant load shedding up to March 2024 unless UCLF can be drastically reduced. The situation is aggravated by a lack of funding for OCGT diesel which is a key enabler for mitigating load shedding.

To enable this plan:

- An additional R13,1 bn will required over and above the R131 bn that has been allocated to the Generation business based on the previous corporate plan
- An additional R12.7 bn will be required to ensure that diesel and fuel oil requirements to sustain the system stability are secured for FY23
- The additional funding requirement is subjected to the rate of exchange and macroeconomic factors e.g. commodity and oil prices

Recovery of the 6 000 MW Eskom capacity and procurement of additional capacity of more than 5000 MW in 24 months are dependent upon the key external enablers being implemented. Delays or inability to ensure the enablers are implemented, will necessitate a review of the achievable capacity in the next 24 months.

Page:	4 of 30	

## 2 Introduction

Due to the current poor and deteriorating availability of Generation, and the coal fleet in particular, and following the appointment of a new Eskom Holdings Board (the Board) as well as a Business Operations Performance Committee (BOPC), a BOPC workshop was held, on 19 November 2022 with the Top 6 power stations. These stations were chosen to focus on because Generation has determined that they show the greatest potential for adding available MWs to the grid by improving their performance. The workshop focussed on the Generation recovery plan with special phasis on these 6 stations' turnaround plans.

The outcomes from this session were presented to the Board on 29 November and the presentation was subsequently updated taking Board members' comments into consideration.

On 10 December 2022, the BOPC met to prepare a presentation on Generation Recovery. This was discussed and influenced at a Board meeting on the same day. After a number of iterations, this presentation was accepted by the Board. In addition, a presentation focusing on enablers for Generation Recovery was prepared for the State President. for his meeting with his Ministers to discuss the steps required to end load shedding.

During the Board meeting of 15 December 2022, Generation's response to specific comments from Board members was also presented to, and accepted by, the Board at the meeting of 15 December 2022. At this meeting, the Generation Recovery presentation was accepted with a request to include further information on roof-top PV in the presentation.

This document is a consolidation of the Generation Recovery, based on the aforementioned presentations, including updates.

Ruyl

_				
$\Box$	$\overline{}$	~	~	,
г	a	u	u	

5 of 30

## 3 KEY ASSUMPTIONS AND ENABLERS

### 3.1 Key Assumptions for Generation Recovery Plan

The following are key assumptions made in developing the plan and targets for improvement. Should any assumptions not hold, then the achievement of planned targets cannot be guaranteed.

- Generation is not the supplier of last resort to close the supply gap, but seeks support government in achieving security of supply as the country transitions to clear technology
- Generation stations will be shut down according to the 2035 shutdown plan Coal units to shut down by end 2025
- For outage planning, a base unavailability of 13 000 MW is assumed
- A solution will be found for Minimum Emission Standards (MES) compliance and the 16 000 MW at risk will continue to operate
- The IRP will be updated, and new capacity will be commissioned in line with IRP
- Funding to enable OCGT load factors of 8% will be available
- Funding for technical plan, outage plan and cost-plus mines will be available in time to order long-lead items
- The additional funding requirements are subjected to the rate of exchange and macroeconomic factors e.g. commodity and oil prices
- Eskom path to cost-reflective tariffs approved by NERSA and implemented
- National Treasury will provide support to reduce Eskom debt
- Municipal debt will be reduced significantly through Government intervention

Key L

13-532

_		
Page:	6 of 30	
 r aye.	0 01 30	

#### 3.3 External Enablers

A number of key external enablers need to be in place as a condition to guarantee success.

Initiative	External enablers that must be in place	
EAF Recovery	Funding for diesel for Eskom OCGTs and potential to limit IPP OCGTs to 1% load factor, to buffer uncertainty and unpredictability of the coal fleet, 2 000 to 3000 MW OCGT to enable grid stability  Funding for fuel oil to ensure units are able to run or be returned to service  In principle support for Eskom to implement performance incentive schemes aligned market rate  Alignment on Eskom's role as supplier of last resort when having to make trade-offs between plant maintenant system constraints  FERFORM  FERFO	'H AFR
Additional capacity	Support to operationalise Transmission company (NTCSA) – key enabler to bringing on additional capacity and NTCSA to drive transmission infrastructure expansion and facilitate an energy market. Unlock more than Over 10 GW private power projects in the pipeline  Exemption from the New Generation regulations to accelerate emergency procurement of additional generation.  NERSA concurrence for cost recovery to enable funding of the additional capacity  Direction on procurement mechanism for bilateral contracting with Independent Power Producers (IPPs)	H AFR
Grid strengthening and expansion	<ul> <li>Streamlining expropriation and servitude acquisition including expediting EAIs to TDP deliver</li> <li>Optimised localisation requirements from DTIC to overcome constrained resource capacity in the country across the engineering, procurement and construction value chain</li> <li>Ensuring capex requirements are especially in the latter 5 years of the plan</li> </ul>	
Financial sustainability	<ul> <li>Timeous determination on Eskom's tariff increase and more certainty around price path towards cost reflective tariff will enable better planning and timeous release of funds. Will enable better allocation and budgeting for capital projects</li> <li>Solution to municipal debt challenge, munic debt growth triples in the last 5 financial years reaching ~R 53 bn in current FY</li> <li>Solution to Eskom's debt, halving Eskom's debt service costs (currently ~R33 bn/ annum) will make Eskom profitable</li> </ul>	

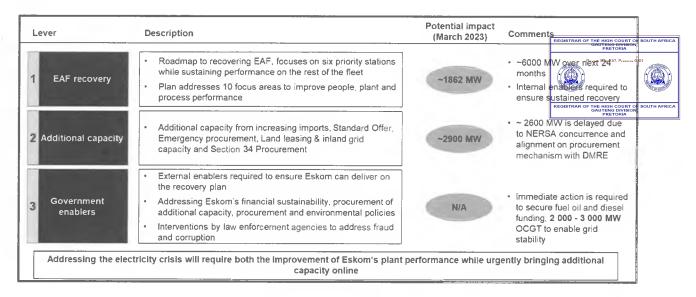
Klyl

P	2	a	۵	

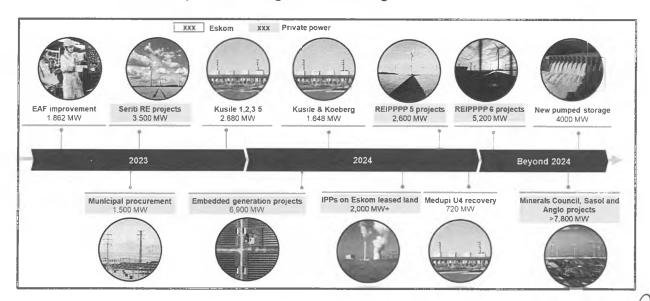
7 of 30

## 4 THE PLAN TO END LOAD SHEDDING

The plan to end load shedding will require EAF recovery, additional capacity and Government enablers.



#### 4.1 The Roadmap to Resolving Load Shedding



Page: 8 of 30	
---------------	--

#### 4.3 Additional Capacity

Eskom is unlocking investment in generation capacity in four areas:



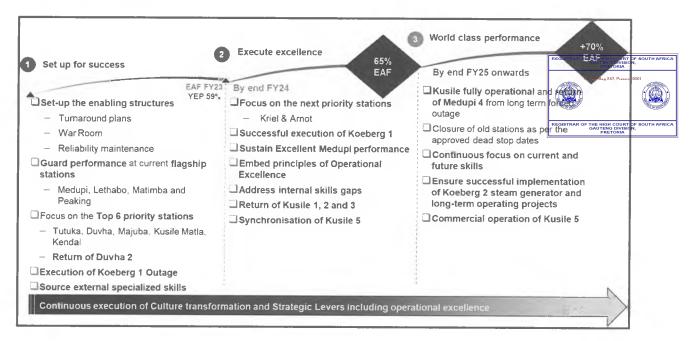
Eskom is driving the following interventions to increase additional capacity and manage demand.

	x Eskom Distribution x	External		
Initiative	Description	MW target	Target Date	
Demand Management	Achieved 250 MW (DM + EE) Signed     Demand Side Management and Energy Efficiency program     Smart Meters (unlock customer options)	1 450 MW	2023 - 2026	
Demand Response	<ul> <li>Demand Response – Dx Mid Segment + Power Alert</li> <li>Additional merit order + 1 000 MW (Dx initiative)</li> <li>Default Munic – deployment DDMP (Dx initiative)</li> </ul>	+ 1 000 MW	2023 - 2024	
Dx Standard Offer	<ul> <li>Grid Flexibility to service – local, Storage regional and national objectives</li> <li>EV charging and Storage aggregation</li> </ul>	+ MW	2023 - 2026	
Expanding Existing Initiatives	<ul> <li>10% Building Energy Efficiency</li> <li>Implementing Demand</li> <li>(Mid Segment) Load Curtailment</li> <li>Energy Wise Ambassador</li> <li>Default Munic – deployment D</li> <li>SMART Networks</li> <li>Previous program</li> <li>Rejuvenating the Comm. Cam</li> </ul>	+ 10100	2023 - 2024	0
Key Enabling	<ul> <li>DRME – determination for the allocation of DDMP</li> <li>NERSA – cost recovery – RCA</li> <li>NT – PPPFMA</li> <li>Dx Comm. &amp; Techn. VPP (Aggregation)</li> <li>Battery storage and Rooftop IPP programme</li> </ul>		Mar 2023 Mar 2023 Mar 2023 2023 2023	

My L 13-535

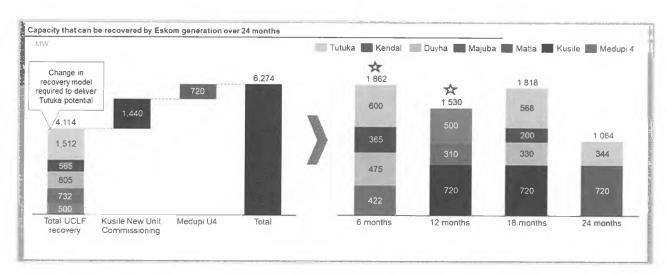
#### 4.4 EAF Recovery

Generation's Recovery Plan is Geared towards Improving EAF from 58% to at least 70% from the end of FY25 onwards.



#### 4.4.1 Action Plans

By recovering capacity, commissioning New Build, ~6 000 MW can be delivered by Generation in the next 24 months.



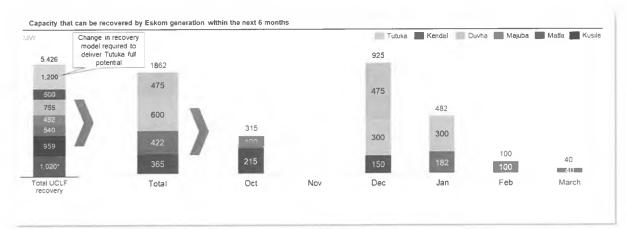
13-536

Page:	10 of 30	

#### Notes to graph above:

- Numbers are based on UCLF reduction committed, given the current YTD performance levels, and resultant availability factoring in planned maintenance.
- Total of 1 960 MW from Kusile (360 MW performance improvement and 1 600 MW commissioning of 2 units)
- Kusile 1, 2, 3 failed after plan was developed. We can expect units 2 and 3 (1 440 MW) in the next 6 months and unit 3 (720 MW) in 12 months. The net impact unit 0 and is not reflected in this plan. See .
- Medupi 4 will return from long term forced Outage by 31 August 2024
- The plan with timelines is being developed to address the Kusile U1 duct failure and consequent damage to Unit 2 and 3 and will offset the potential gains in the near term and until the units are fully recovered.

The original target for the six months to March 2023 was 5 426 MW but further analysis shows that 1 862 MW sustainable gains could be be made.



In October 2022, the UCLF recovery trajectory indicated that ~5 400 MW could be recovered within the subsequent six months (to 31 March 2023) from the coal fleet. In November 2022 it was decided to only show the Top 6 stations were being specifically focussed on even though all stations had EAF improvement plans. Thus, the "other" category (brown) was removed (1 020 MW) from this tracking.

Kusile recovery was also removed due to the failures of the flue gas ducts on units 1,2 & 3. This reduced the targeted gains by 959 MW. Defect resolution recoveries were also removed from plan as they are not sustainable. These were: Majuba (452 MW), Matla (118 MW), Tutuka (600 MW),

 Page:	11 of 30	
1 440.	110130	

Duvha (280 MW), Kendal (135 MW). This resulted in a target of 1 862 MW of sustainable gains in the 6 months.

The following informatic shows of the 315 MW that were targeted in October, 215 MW were gained as well as an additional 596 MW were gained in other areas. However, there were other losses of 978 MW, resulting in a net loss of 132 MW. In November, no gains were expected and 925 MW are targeted for December 2022.

Quarter 3 Planned Re	ecovery	Station	Planned Recovery (MW)	Planned date	Realised (MW)	Key Activity	Comments	Additonalissues
Tutuka Kendal	Duvha	Matia	U3 100	31 Oet 2022	100	Condensercleaning	Recovered, defects corrected but not sustainable	Gains reduced due to poor coal REGISTRAN OF THE HIGH COURT OF SOU GAUTENS DIVISION, PRETORIL
Matta	925	Kendal	U1 215	31 Oct 2022	0	ESP and (D fan repairs	U1 in progress = 31 December 2022 Additional issues addressed U2 ID fan repairs (250MW) U3 ID fan repairs (50MW)	PRETORIA Overall recovery negatively impacted by U2 Ash removal constraints — high dust emissions (300M/y/) U3 — Outage Aug 2023 SEC Air Heater packs damaged (238M/y)
315			U6 150	31 Dec 2022	150 ( <b>350</b> )	ID fan repairs & balancing	Activity completed  Algorithmal issues addressed  US ID fan reparts & balancing (200Ms)  US RN PA heater ar, outlet demper repairs \$66MV.	Und 8 Steam turbine leak (~350MW)  Outage starting in Nov 2023 – Feb 2024
100	300	Duvha	U2 475	31 Dec 2022	1	Boiler external fire repairs	In progress - RTS 10 Dec 2022	Cooling towers 18.2 cleaning in progress Condenser vacuum impacted as a result
Oct Nov	150 Dec	Tutuka	U1 300	31 Dec 2022	67.0	Unit 1 Condenser HP Cleaning Unit 1 HP heater tube plugging and valves replacement	Successfully completed the HP washing on condenser (the condenser performance will be shown upon unit start up.)	U1 283 West Cooling Tower Fills Replacement Project [31 08 2023] will have negative impact on condenser vacuum losses

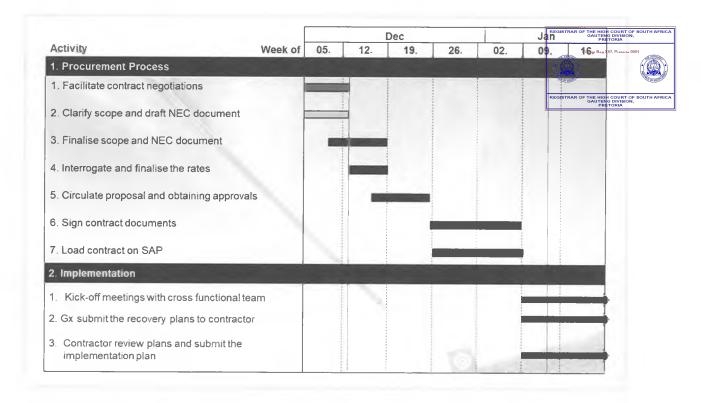
For the following 3 months, 622 MW are targeted. However, outages at Matla units 5 and 6 have been moved to later in 2023 and the 140 MW (100 and 40 MW) targeted in February and March cannot be achieved in this financial year.

arter 4 Planned Recovery	Station	Planned Recovery (MW)	Planned date	Key Activity	Comments
Tutuka Matia	Tutuka	250 50	31 Jan 2022	U3 condenser chemical cleaning U3 HP heater A & B banks repairs	U3 – Outage 14 Dec 2022
100	Matla	182	31 Jan 2022	U4 - Cooling Tower (CT) 5 repacking	U4 - On GO CT4 completed, CT5 in progress
100	Matla	100	20 Feb 2022	U5 - Cooling Tower 5 repacking	U5 – Outage moved to June 2023 CT4 completed, CT5 in progress
an Feb Mar	Matla	40	31 Mar 2022	U6 - Cooling Tower 6 repacking	U6 – Outage moved to Sept 2023 CT 4 completed, CT5 in progress

Page 42 of 143

Page:	12 of 30	
 raye.	12 01 30	

Each station has detailed recovery plans and, starting with the Top 6 stations, these are being centrally monitored and the tracking of related actions is being implemented and this process will be automated. The plans will be stress-tested by independent consultants reporting directly to Board. Engagements have already started with the external service provider to provide these reviews.



The team will provide assurance on the execution of recovery plans by following a detailed work plan with deadlines in order to ensure project success. The target is to have the contract signed by 23 December with the Kick-off meeting on 9 January.

20

<u>Page:</u> 13 of	30	
--------------------	----	--

#### 4.4.2 Focus areas

In order to enable this recovery, Eskom has regrouped efforts on focus areas to improve people, plant and processes performance. These are essential for turnaround.

10 Focus areas	What we are doing					
Plant Condition	Increased maintenance within limitations. Establish Warroom, accelerated spares sourcing.  Establish long term contracts.					
Inadequate Capacity	Optimise maintenance planning. Engaged to expedite IPPs, Risk Mitigation etc. Planned repowering of stations shutting.					
Skills & Experience	Stability In GE & PSGMS. Appointing Plant Managers. Engaging experienced external experts. Ramping up training and development. Skills/competency audit. Culture of the Hope Court of Skills/competency audit. Culture of the Hope Court of Skills/competency audit. Crowdsourcing, Project management,					
Fraud & Corruption	Eskom has increased governance controls and performs trending analyses on volumes and prices. Investment in technology, QSs, training.					
Policies & Procedures	Engaged government (DPE, NT) for relaxation of some requirements.					
Funding	Aggressive cost cutting. Making funds available for outage and midlife refurb					
Environmental Compliance	Proposed an emission reduction plan that is achievable. Appealed DFFE decision.					
Coal	Engaging mines requality & quantity. Renegotiating agreements. Investing in cost-plus mines. Increasing verification and monitoring.					
New Build Defects	Solutions for some areas developed and tested on Medupi 3. Rolled out to other units. Additional solutions to be rolled out to achieve desired performance.					
Eskom Rotek Industries	OEM engineering support and oversight on turbine centreline. Improved Quality Assurance process.					
	De-scoping ERI contracts and approach OEMs on specific plant areas, e.g., Kusile FGD					

Progress has been made in some areas:

- 1. National Treasury has relaxed some requirements which will speed up procurement
- 2. The allocation of Outage budgeting has improved, resulting in signs of improved Outage Readiness
- 3. Eskom is receiving good collaboration from external stakeholders with a willingness to assist Eskom
- 4. On the 9 Point plan we have seen success in the following areas:
  - I. The new build defect repair. Medupi performance is improving
  - II. Achieving coal stock days and rain readiness programme is in place



Page:	_1	4	<u>of</u>	<u> 30</u>	

Additional focus has been placed on prioritising maintenance at the **Top Six Stations**; Duvha, Kendal, Kusile, Majuba, Matla & Tutuka. These stations were specifically selected as they are amongst the highest contributors to unplanned load losses. **Any improvement in these stations will result in massive gains in EAF** for Generation as a whole.

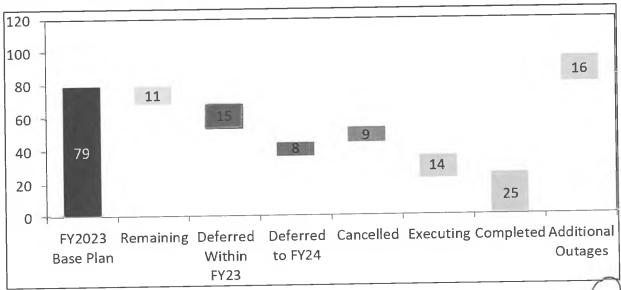
In addition to the focus on technical issues, recommitting to Operational Excellence is key to a sustainable performance improvement. In following "A WAY OF LIFE", Generation's Operational Leadership Excellence stream implementation, together with Management change will stabilisation of Generation Leadership through the proposed interventions specifically focused on improvement. Generation will have a two-pronged approach to addressing the Leadership gaps:

- 1. Quick wins will be managed in the short term. There are a number of focus areas that have been identified with numerous interventions in each of these areas; all contributing to further developing Generation's Leadership/Management skills
- A blueprint will be designed to ensure long term sustainability. Some of the short-term initiatives will roll over into the blueprint to ensure long term success and will therefore require longer term and more detailed development i.e. specialized Leadership training programmes, Goal setting and direction, Accountability, Business integration etc.

#### 4.4.3 Challenges

### 4.4.3.1 System Constraints

There are, however, significant challenges. Primarily due to the volatility of system as well as budget and capacity constraints, outages continue to be deferred or cancelled, including those on the Top 6 stations. Additional capacity is needed to enable execution of the required outages.



13-541

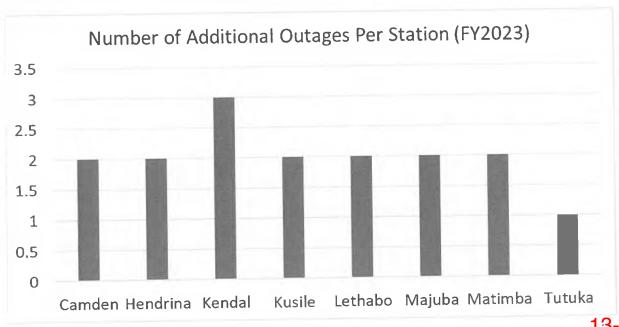
Page:	15 of 30
FAUE	10 01 00

The moving of these outages is essential to avoid even higher stages of load shedding but not only have the effect of delaying the performance improvement work but also disrupt station outage preparation, leading to inefficiencies.

The table below shows that even for the Top 6 Stations, Eskom was forced to defer or cancel reliability outages.

Station	GO	MGO/MO	IR	IN	Other	Additional PRETORIA 0001
Tutuka	2 (1 Can, 1 Executing)			1 (Remaining)		1 (Completed)
Duvha		1 (Deferred)	1 (Completed)			REGISTRAR OF THE HIGH COURT OF SOUTH AFR GAUTENG DIVISION, PRETORIA
Majuba		1 (Executing)	1 (Executing)		3 (1 Executing, 2 Completed)	2 (Completed)
Kusile				1 (Cancelled)	1 (Cancelled)	(2 Completed)
Matla	1 Deferred	1 (Executing)		+	4 (2 Completed, 1 Cancelled, 1 Deferred)	
Kendal	2 Deferred	+	+	3 (2 Completed, 1 Executing)		3 (Completed)

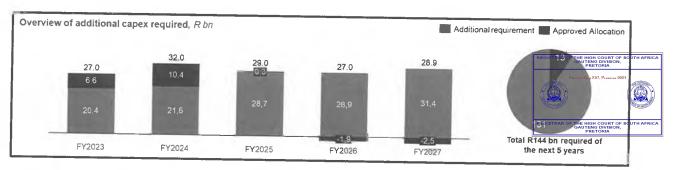
Despite planned outages being deferred and cancelled, space is found for additional outages. These are typically to address the most urgent emergent issues that could result in load losses or plant damage. Due to the system constraints, these outages are typically shorter in duration and often can only address the symptoms and not the root cause of problem.



 Page:	16 of 30	

#### 4.4.3.2 **Funding**

Current Capex allocations are insufficient to successfully execute the recovery plan. An additional R13,1 bn is required.



The net increase to the approved FY2023-2027 Capital Plan is R13,1 bn with a higher allocation of capital required especially in FY2023 and FY2024. The higher capital requirement is as a result of:

- Outage Capex increased from R8,2 bn to R9,5 bn from shortfalls experienced at Kendal, Kriel, Camden and Matla. R0,3 bn is attributed to material costs and R0,90 bn from contracts/labour
- TechPlan shortfall amounted to R4,9 bn over the five years due to approvals on previously unfunded critical projects incl. Kendal U1-4 Precipitator Rebuild; Medupi 4-8 year Ash dump extension, Matimba and Lethabo C&I replacements, Generation vehicle fleet replacement and Tutuka cooling tower replacements
- Gx Clean & Coal Battery Storage acceleration (funds required earlier in FY23-24) and net increase of R1,1 bn based on the August 2022 market response (latest indication is that prices will increase further)
- Future Fuel increase of R3,6 bn due to contractual obligations on the cost-plus mine and capitalized requirements for safety, health, current operational equipment and new mining expansions to meet the minimum contracted coal volumes
- Nuclear fuel net increase of R1,3 bn due to market fluctuations impacted by changes in the cost of nuclear fuel conversion and enrichment, and further aggravated by the war in Eastern Europe

**Note:** The Board approval of the Komati Repowering Project funded by the World Bank amounts to R5,35 bn and is not shown in this requirement but has been included in the FY2024-2028 Capital Plan.

Damai	17 of 30	
Page:	1 / OT -5U	

#### 4.4.4 Levers

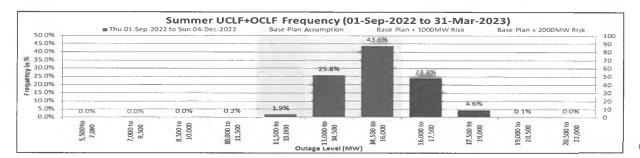
A number of levers and concessions are required to support turnaround.

People	Focus on Crowdsourcing. Incentives, Project management, Culture, Discipline, Ethics and values. Temporary relaxation on headcount caps. Fast-track visas for essential workers				
Eskom Supplier Database	Internal database for critical components – pre-approved suppliers.	REGISTRAR OF THE HIGH COURT OF S GAUTENG DIVISION, PRETORIA			
Budget approval hold points	Can go to market before budget release. Contracts only placed on budget approval	Private Bag X67, Pestoria 00/1			
SD&L Requirements	Skills dev and CSD10, use of OEMs, BBBEE levels agreed, Designated products.	REGISTRAR OF THE HIGH COURT OF S GAUTENG DIVISION, PRETORIA			
PPPFA Tender Evaluation and Award Criteria	Use of flexible evaluation matrix.				
Availability of Capex Funding	Aggressive cost cutting. Making funds available timeously for outage and midlife refurb				
Urgent Procurement	Urgent and emergency procurement for all Production Risks				
Organisational Effectiveness and Development	Morale - allow team building, year-end functions, socials and sports events etc.				
Environmental Requirements	Exemptions requested for relaxation of emissions abatement projects (in legal process), Special conditions during loadshedding to exceed emissions limits, Relaxation of ash dump liner requirements (financial impact)				
External Security / Police Support	Security of assets and infrastructure, forensic and specialized security support for the coal value fraud and corruption cases, undercover agents imbedded in power stations to root out corruption prosecution.				

#### 4.4.5 System Status

Transmission produces a Monthly System Status Summary which considers three scenarios to take the unreliability of the plant into account. The first is the base case which assumes an unplanned provision (an assumption of how many MWs will be unavailable due to unplanned causes) of 13 000 MW. The two risk scenarios then add 1 500 and 3 000 MW to the base case.

Even on the base case, this view projects significant OCGT usage and load shedding. However, The histogram below shows that unplanned losses exceed even the +3 000 MW Risk scenario almost 30% of the time.



Page:	18 of 30

#### 4.4.6 Conclusion to EAF Recovery

Eskom is acutely aware that the current performance is unacceptable and impacting on the people and economy of South Africa. However, Eskom cannot solve the situation on its own and needs help.

The recovery plan aims to gain ~6 000 MW in the 24 months but the success of the Recovery plan is highly dependent on both internal and external factors.

Internal factors are being addressed by focusing on operational excellence which encompasses Plant Condition, Inadequate Capacity, Skills & Experience, Fraud & Corruption, Procedures, Funding, Environmental Compliance, Coal, New Build Defects, Estate Procedures. However, without the external factors being resolved, sustainable performance improvement is not possible.

#### 4.5 Additional Capacity

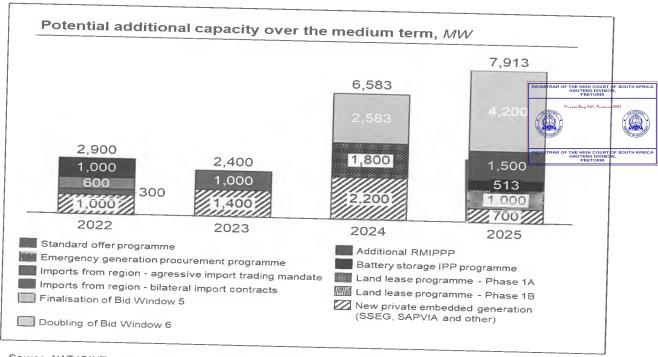
#### 4.5.1 Potential Additional Capacity

A total of ~19 800 MW potential additional capacity has been identified in the medium-term, with the most capacity potentially coming online after 2025. The standard offer programme will allow for ~1 000 MW in 2022 if approvals and associated activities are expedited.

The acceleration of projects within Bid Windows 5 and expansion of Bid Window 6 are the biggest opportunity areas to bring capacity online. BW 5 has an expected COD in 2024 and BW 6 in 2025.

The NATJOINTs programme will be a crucial enabler to ensure activities at all levels are expedited appropriately.

The graphic below is an overview of additional capacity that can be brought online over the short to medium term (2022 - 2025).



Source: NATJOINTs workstream 3, New generation capacity, 15/08/2022

However, action is required to expedite the ~4 200 MW of additional capacity of which 3 000 MW is delayed/behind schedule.

Initiative	Description	MW target	Target Date	On track Delay  Reason for delays
Increasing imports	Increasing imports via the South African Power Pool (SAPP) through enabling import trading mandate (300 achieved) and bilateral import contracts (1000 at risk)	300 MW	Oct 2022	1000 MW from Mozambique due to high price offer of R4,950 /kWh
Standard Offer	Procurement of energy through power purchase agreements of maximum 3 years duration to provide certainty for customers with embedded generation	1 000 MVV	Sep 2022	Awaiting NERSA concurrence for cost recovery
Emergency procurement	Procurement of capacity from existing generation facilities by increasing utilisation. Large customers with own generation to compete on a daily basis against OCGT costs	600 MW	Sep 2022	Awaiting exemption from New Generation Regulations (DMRE) and NERSA concurrence for cost recovery
Land leasing & inland grid capacity¹	Leasing of Eskom land to IPPs to enable additional PV capacity Strengthening parts of the existing grid (mainly in Mpumalanga) to unlock the potential for additional capacity (Phase 1A and B)	2 800 MW	Nov 2023	On track
Section 34 Procurement <sup>1</sup>	Bid window 6 (additional) RMIPPP Battery storage IPP programme	<b>2 583 MVV</b> 4 200 MVV	Aug 2022 Jun 2025 Jan 2025 Sep 2022	1500 MW from additional RMIPPP delayed due to deadlock on Indemnity Agreement on Karpowership     NT approval currently delaying Battery storage IPP programme

Note: 1. There is an additional 5 300 MW from New Private embedded generation that can be added by 2025

Note: 2 Land leasing and section 34 procurement indicate projects that will be developed – commercial operation (MW delivered) of these projects expected 2-3 years from indicated target date

13-546

Page:	20 of 30

#### 4.5.2 Feed in Tariffs

In addition, an effective increase in capacity can be attained through encouraging an increase in Small Scale Embedded Generation (SSEG) through Feed in Tariffs (FiT) and Net Billing. This is being driven by Workstream 3 of the NECOM.

South Africa's FiT and Net-billing Proposal for SSEGs is summarised below.

The Net Billing option:

• The NERSA stance put forward is that SSEG tariff determination is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility. The reformation is a commercial arrangement, between a customer (not a licensed generator) and the utility is a commercial arrangement (not a licensed generator) and the utility is a commercial arrangement (not a licensed generator) and the utility is a commercial arrangement (not a licensed generator) and the utility is a commercial arrangement (not a licensed generator) and the utility is a commercial arrangement (not a licensed generator) are arrangement (not a licensed generato

A legal opinion was requested on the following:

- Whether NERSA has the mandate to develop a net-billing framework.
- Whether NERSA has the mandate to approve net-billing tariffs (including the export credit rate) or not.
- If not, is there a government department that is legally obliged to develop the proposed model guideline or framework, as outlined above; or whether this can lie with the NECOM structure that is responsible for the EAP?
- Whether the compensation provided under net-billing on the bill is viewed as a purchase of power or whether it meets the fungible principle.
- If the legal opinion is that net-billing is a purchase of power, what regulatory process would pertain to a Distributor for such cost-recovery and impact on customer tariffs? Would NERSA cost-recovery be required, especially considering that these do not follow Section 34 determinations and the customer is not a licensed generator?

#### The FiT option:

- If a FIT tariff is to be implemented, there will be a requirement for national policy and potentially regulatory rules/legislation to enable such a scheme.
- This would have to cover the implementation issues such as eligibility, the utility's role, the contracts and duration, the price, cost-recovery, and the payment mechanism.

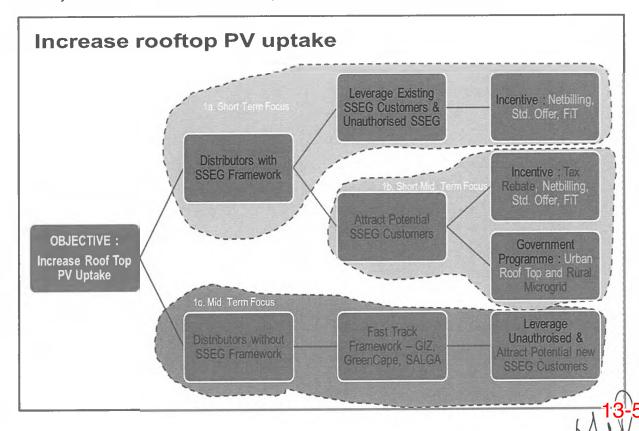
The legal opinion requested is as follows:

Whether a FIT tariff would require legislation, or could current legislation accommodate it

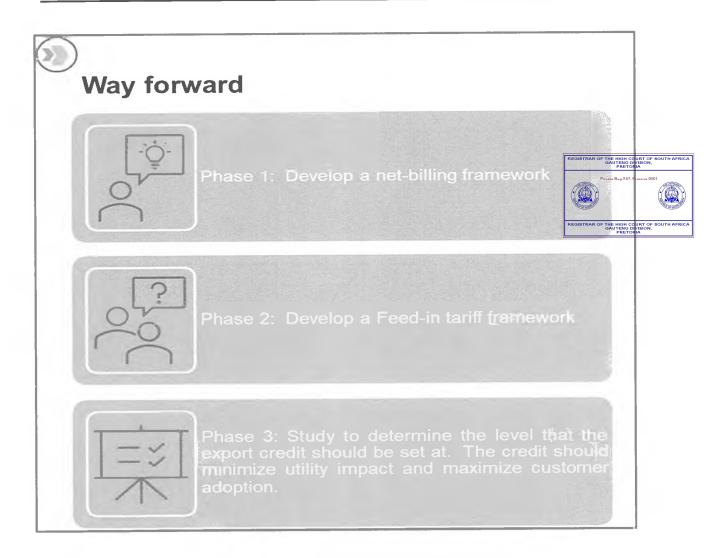
Page:	21 of 30	

- Would a Section 34 determination and NERSA concurrence and NERSA cost recovery be required to implement such a scheme?
- Would compliance to the New Generation Regulation be required?
- Would PFMA (and MFMA) and National Treasury approval be required?
- Would such a scheme be nationally implementable, or could municipalities be permitted to develop their own scheme?
- Which authority would be best placed to administer and fund FIT? Could such authority be given to NERSA?
- Would procurement by an Organ of State on a fixed tariff be allowed (that is, not purchase on bid prices)?
- Would PPAs be required for purchase the energy, or could this be done through a simple contracting?
- Could the Standard Offer mechanism and approvals be used as the FIT (see attached Annexure on the Standard Offer).

The objective would be to increase the uptake of rooftop PV to support the system.



D	22 of 30	
Page:	22 OF 3U	

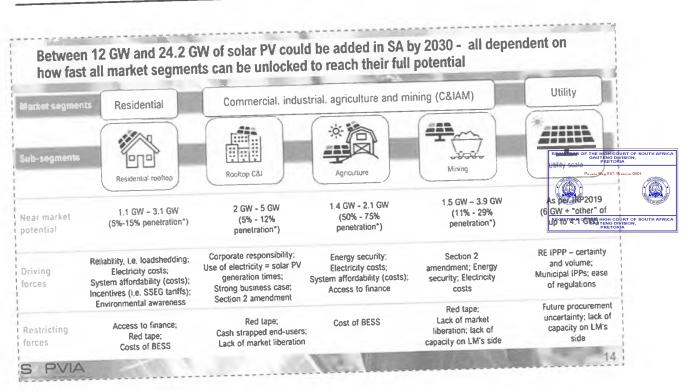


#### 4.5.3 Rooftop PV

There is significant potential for rooftop PV in future. According to SAPVIA report:

- In 2021, 715 MW of solar had been added (i.e. 72 MW from Residential @ 30% growth, 465 MW, from Commercial & Industrial (C&I) @ 60% growth, 140 MW from Agriculture @ 45% growth, 36 MW from Mining with slow growth but 860 MW announced or 2022-2025)
- At end of 2021, an estimated total of 1 920 MW was installed (i.e. 187 MW Residential. @ 10% penetration, 1 300 MW C&I @ 8.5 % penetration, 340 MW Agriculture @ 62.5% penetration, 93 MW Mining @ 20% penetration)
- A potential of 10 050 MW is estimated by 2030 (i.e. 2100 MW Residential, 3 500 MW C&I, 1750 MW Agriculture and 2 700 MW Mining).

This could be even higher should full potential be realised.



There are challenges to unblocking this potential:

- Smaller customers (especially those with unauthorized SSEG installations) avoid and resist
  upfront grid connection related costs for bi-directional metering related costs and security
  deposit shortfalls.
- Unbundled tariffs so that customer avoidance of costs is limited only to energy and not fixed costs.
- Low Voltage Regulations (SANS10142) for SSEG connections to reduce the costly Professional Engineering costs on installation compliance sign off.
- SSEG framework to handle applications, quote customers and connect within rules and available hosting capacity on municipal networks.
- Funding mechanism and incentives to make SSEG more accessible to all customers. This
  could be in the form of tax incentives for those that can self-fund and mass rollout
  programmes for others with innovative funding via the existing monthly bill for ownership
  within life cycle.
- Compensation mechanism so that Distributors can procure customer SSEG surplus energy i.e., SO or FiT.

To address these challenges, there are enablers but these need to be implemented in order to realise the potential of rooftop PV:

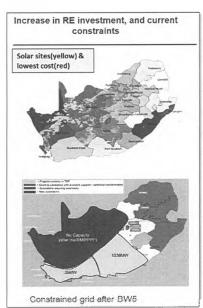
Set up a national SSEG task team to assist all municipalities with a SSEG framework.

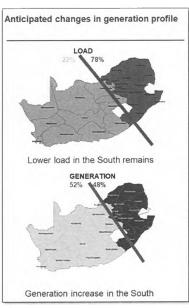
5	04 500	
Page:	24 of 30	
rauc.	27 01 30	

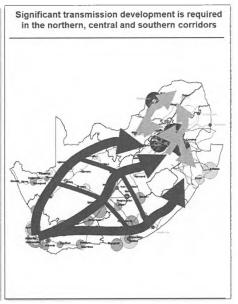
- NERSA fast track approval of unbundled tariffs to enable SSEG connections e.g., Homeflex for Eskom residential customers.
- Encourage SABS to urgently publish the outstanding SSEG rules on the SAN10142 (LV regulations).
- National guidance is sought (NERSA, EPP, etc.) on innovative mechanisms to recover on SSEG related costs.
- Approval on national funding mechanisms for mass roll out of Roofton programmes together with smart dispatchable batteries that support the system operator to manage the network remotely.
- National framework to guide and enable procurements mechanism/s for SEG surplus energy.

#### 4.6 Addressing Grid capacity constraints

Changes in the generation profile are driven by developments in the SA electricity supply industry. Grid system requirements are heavily dependent on changes in the location of generation capacity and the load.







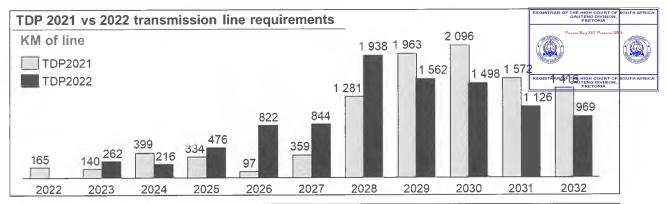
The Transmission Development Plan (TDP) has been updated to factor in the changes in the future outlook. The TDP 2022 thus factors in new capacity requirements in line with 2035 strategy / shutdown plan.

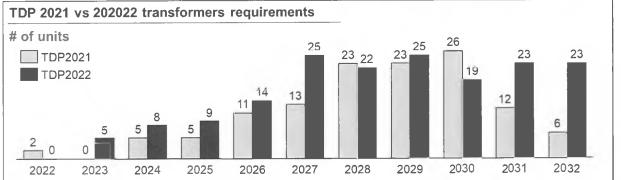
The graphs below illustrate the transmission line and transformer requirements based on a constructable plan. From 2023 to 2032, Eskom requires 9 800 km of transmission line and 128

Page:	25 of 30
-------	----------

transformers. Removing the constraints, ~14 200 km and 170 transformers are required. This means that 765 kV corridors and reliability projects may be deferred.

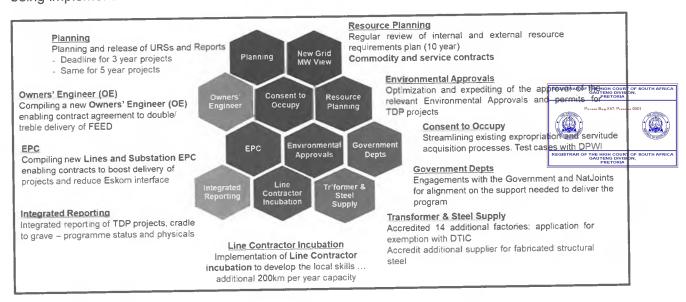
In addition, there are significant risks that need to be managed. These include the acquisition of servitudes, a constrained resource capacity in the country across the engineering, procurement and construction value chain, and Capex requirements; especially in the last 5 years of the plan.





Page: <u>26 of 30</u>

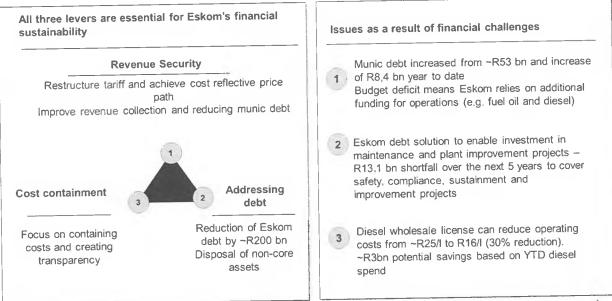
To address these risks and to ensure delivery against the plan, a number of priority initiatives are being implemented.



## 4.7 Key enablers

#### 4.7.1 Financial Sustainability

Addressing the financial sustainability in Eskom is a key enabler addressing the crisis. There is also no one solution, it must come from a combination of cost containment, revenue security and an addressing of the unsustainable debt burden.



Demai	27 of 30
Page:	27 01 30

#### 4.7.2 Government enablers

There are several key external enablers that are required as conditions precedent to enable Eskom to deliver against the plan to end load shedding. These are in the ambit of government and related departments or functions.

Department	Actions	
national treasury  Department National Treasury REPUBLIC OF SOUTH AFRICA	<ul> <li>Eskom debt solution to enable funding of projects (California) obsolescence, plant upgrades, cost expansions and other critical plant</li> <li>Funding for diesel for Eskom OCGTs and limit IPP OCGTs to 1% load factor, to buffer uncertainty and unpredictability of the coal fleet, 2 000 to 3 000MW OCGT to enable grid stability</li> </ul>	0001
	<ul> <li>Funding for fuel oil to ensure units are able to run or be returned to service</li> </ul>	
	<ul> <li>Alignment on procurement policies, e.g. urgent procurement process to enable broader application of the practice note 3, implementation of closed tenders based on supplier pre-qualification managed by Eskom</li> </ul>	
	<ul> <li>Eskom to be enabled to implement more stringent requirements over and above 90:10 scoring principle to incorporate functionality</li> </ul>	
	<ul> <li>In principle support for Eskom to implement performance incentive schemes aligned market rate</li> </ul>	
	<ul> <li>Exemption form NT practice note 11 of 2008/09 regarding unsolicited proposals for additional capacity</li> </ul>	
mineral resources & energy	<ul> <li>Alignment on Eskom's role as supplier of last resort when having to make trade-offs between plant maintenance and managing system constraints</li> </ul>	
Department Mineral Resources and Energy REPUBLIC OF SOUTH AFRICA	<ul> <li>Exemption from the New Generation regulations to accelerate emergency procurement of additional generation</li> </ul>	
	<ul> <li>NERSA concurrence for cost recovery to enable funding of the additional capacity</li> </ul>	
	Direction on procurement mechanism for bilateral contracting with Independent Power Producers (IPPs)	

		Page:	28 of 30	
NATIONAL ENERGY REGULATOR OF SOUTH AFRICA		the appropriate to price path  Enable feed in tarif and storage, up to NERSA approval boarder power pur battery energy storage.	r of support from NERSA to e	cop PV
the dtic  Department: Trade, industry and Competition REPUBLIC OF SOUTH AFRICA		temperature steel filter bags materi pressure valve)  Interim exemption shortages impacti	signation of products, e.g. for pressure containment, al imports, high temperature for SMART Meters - sung ability for Eskom to impliventions (e.g. net billing and for the signal of th	fabric e and upplier ement
forestry, fisheries & the environment  Department: Forestry, Fisheries and the Environment REPUBLIC OF SOUTH AFRICA		emissions standar emission improver will be shut down in clean energy techn Revision of ash financial implication	dump liner requirements ans ecial conditions to exceed	obn in that longer against
STIGATING UNIT	•	agencies. Support	n and support for law enforce required from NPA has been nal Director of Public Prosec	taken

13-555

(NDPP)

Page:	29 of 30	



- Dedicated South African police unit to tackle organised crime and provide infrastructure security
- Police escort for coal trucks and deployment of security forces outside on Mpumalanga





Page:	30 of 30	
raye.		_

## 5 CONCLUSION

Eskom cannot solve the current crisis on its own and there is no quick fix. In addition to the actions taken by Eskom, sustainable turnaround requires underlying issues to be resolved.

The only way to do this and end load shedding is to enable the levers. Support for the levers is essential.

Private Bay X97, Preserve 0001

REGISTRAR OF THE HIGH COURT OF SOUTH AFRICA GAL TRETORIA

Compiled by:

**Brad Ross-Jones** 

STRATEGY DEVELOPMENT MANAGER, GENERATION

Date: 9 January 2023

Approved / Hot approved

Supported / Not supported

Eric Shunmagum

SENIOR MANAGER BE&S, GENERATION

Date: 09 January 2023

Thomas Conradie

GROUP EXECUTIVE GENERATION (ACTING)

Date: 2023-01-15

13-557